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**IN THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA**

FUZHOU FIREEGG ELECTRICAL
APPLIANCES CO., LTD., FUZHOU
NO SUGAR ELECTRONICS CO.,
LTD., AND FUZHOU XIAOHAO ER
TRADING CO., LTD.,

Plaintiff,

v.

SIMPLEHUMAN, LLC.,

Defendants.

Civil Action No.:

**COMPLAINT FOR
DECLARATORY JUDGMENT OF
NON-INFRINGEMENT**

JURY TRIAL DEMAND

Plaintiffs Fuzhou Fireegg Electrical Appliances Co., Ltd., Fuzhou (CN),
Fuzhou No Sugar Electronics Co., Ltd., and Fuzhou Xiaohao Er Trading Co., Ltd.
(collectively, “Plaintiff”)¹ brings this action against Simplehuman LLC
 (“Defendant”), and alleges as follows:

¹ Fuzhou No Sugar Electronics Co., Ltd., d/b/a Kitsure-BJT, and Fuzhou Xiaohao Er Trading Co., Ltd., d/b/a Sakugi-XHE are affiliated entities of Fuzhou Fireegg Electrical Appliances Co., LTD.

NATURE OF THE ACTION

1 1. Plaintiff brings this action under the patent laws of the United States,
2 35 U.S.C. § 100 et seq., and the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and
3
4 2202, seeking a judicial declaration that it has not infringed—and does not
5 infringe—any valid claim of U.S. Patent No. US8,631,948 B2 (the “948 Patent”),
6
7 and that the patent is invalid.

8 2. In addition to declaratory relief, Plaintiff asserts claims for tortious
9
10 interference with contractual relations and for unfair competition in violation of
11 California’s Unfair Competition Law, Business and Professions Code §§ 17200–
12 17210.
13

14 3. Plaintiff seeks this relief in response to Defendant’s recent accusation
15
16 of patent infringement relating to the ‘948 Patent. A true and correct copy of the ‘948
17 Patent is attached hereto as Exhibit D.

18 4. On March 29, 2025, Amazon sent several notices to Plaintiff regarding
19
20 a complaint submitted by Defendant under Amazon’s intellectual property
21 enforcement program. The complaint alleges that Plaintiff’s dish drying racks (“Non-
22 Infringing Product”) infringe the ‘948 Patent. True and correct copies of these notices
23
24 are attached as Exhibit B and Exhibit C.
25

26 5. Pursuant to Amazon’s intellectual property enforcement procedures,
27 product listings may be removed if an infringement complaint is submitted and
28

1 remains unresolved. The parties have engaged in efforts to address the matter but
2 have been unable to reach a resolution. Plaintiff is opting not to proceed through
3 Amazon's APEX program, which does not consider defenses such as patent
4 invalidity and is limited in scope to infringement issues.
5

6
7 6. There is a real and immediate controversy between Plaintiff and
8 Defendant that is appropriate for judicial determination under the Declaratory
9 Judgment Act.
10

11 7. Plaintiff seeks a declaration that its design, manufacture, use, sale, offer
12 for sale, and importation of the Accused Products do not infringe any valid claim of
13 the '948 Patent or any other intellectual property rights owned or asserted by
14 Defendant, whether under federal or state law.
15
16

17 8. Plaintiff further seeks a declaration that the '948 Patent is invalid under
18 one or more provisions of the Patent Act, including 35 U.S.C. §§ 102, 103, and/or
19 112. On information and belief, the patent is anticipated by prior art, may be obvious
20 in light of existing disclosures, and fails to meet the statutory requirements of
21 enablement and definiteness. Accordingly, a justiciable controversy exists as to the
22 validity of the '948 Patent, and declaratory relief is necessary to resolve the dispute
23 between the parties.
24
25
26

27 9. In addition, Defendant's actions—including asserting unfounded
28 infringement allegations and interfering with Plaintiff's business relationships—

1 have caused tangible harm. These actions have resulted in the removal of Plaintiff's
2 product listings from Amazon, diminished marketplace visibility, loss of sales, and
3 erosion of hard-earned consumer goodwill.
4

5 10. Defendant's threatened assertion of patent infringement claims against
6 Plaintiff's products has placed Plaintiff's business in immediate jeopardy and given
7 rise to a real, ongoing, and justiciable controversy. Accordingly, and for the reasons
8 set forth above and further detailed below, Plaintiff seeks a declaratory judgment
9 under 28 U.S.C. §§ 2201 and 2202 that it does not infringe any valid claim of
10 Defendant's '948 Patent.
11
12
13

14 **THE PARTIES**

15 11. Plaintiff Fuzhou Fireegg Electrical Appliances Co., Ltd. is a Chinese
16 limited liability company with its principal place of business at Room 306, 3rd Floor,
17 Shanya Technology Center, No. 6 Chuangye Road, Shangjie Town, Minhou District,
18 Fuzhou, China.
19
20

21 12. Upon information and belief, Defendant is a California corporation with
22 its registered office and principal place of business located at 19850 Magellan Drive,
23 Torrance, California 90502.
24
25
26
27
28

JURISDICTION AND VENUE

1 13. This Court has subject matter jurisdiction over this action pursuant to
2 28 U.S.C. §§ 1331 and 1338(a), as it arises under the patent laws of the United States,
3
4 including 35 U.S.C. §§ 100 et seq., and the Declaratory Judgment Act, 28 U.S.C. §§
5 2201–2202.

6
7 14. The Court also has supplemental jurisdiction over Plaintiff’s related
8 state law claims for tortious interference and unfair competition under 28 U.S.C. §
9 1367(a), as these claims are so related to the federal claims that they form part of the
10 same case or controversy.
11

12 15. Personal jurisdiction over Defendant is proper in this District.
13
14 Defendant is a California corporation with its principal place of business in
15 Torrance, California. Moreover, Defendant has purposefully directed its activities
16 toward this forum by asserting patent infringement claims against Plaintiff’s
17 products, leading to the removal of Plaintiff’s listings from Amazon. Such conduct
18 constitutes sufficient minimum contacts with this District. See *Calder v. Jones*, 465
19 U.S. 783, 789–90 (1984) (establishing that intentional actions aimed at the forum
20 state causing harm there can confer personal jurisdiction); *Xilinx, Inc. v. Papst*
21 *Licensing GmbH & Co. KG*, 848 F.3d 1346, 1354–56 (Fed. Cir. 2017) (holding that
22 cease-and-desist letters and related enforcement efforts directed at a forum are
23 sufficient for personal jurisdiction in declaratory judgment patent actions).
24
25
26
27
28

1 16. This Court has personal jurisdiction over Defendant pursuant to Federal
2 Rule of Civil Procedure 4(k)(1)(A). Defendant is headquartered at 19850 Magellan
3 Drive, Torrance, California 90502, which is located within the Central District of
4 California. As a corporation domiciled in this District, Defendant is subject to
5 general personal jurisdiction in this Court. *See Daimler AG v. Bauman*, 571 U.S.
6 117, 137 (2014) (a corporation is subject to general jurisdiction in the forum where
7 it is “at home,” such as its place of incorporation or principal place of business).
8
9

10
11 17. Venue is proper in this District under 28 U.S.C. § 1400(b), which
12 governs venue in patent cases. Because Defendant is subject to personal jurisdiction
13 in this District, it is deemed to reside here for venue purposes. *See TC Heartland*
14 *LLC v. Kraft Foods Grp. Brands LLC*, 581 U.S. 258, 262–63 (2017).
15

16
17 18. For the same reasons, venue is also proper under 28 U.S.C. §
18 1391(b)(1), as Defendant is a resident of the state in which this District is located.
19

20 **FACTUAL BACKGROUND**

21
22 19. On January 21, 2014, the United States Patent and Trademark Office
23 issued the ‘948 Patent, which purports to cover a dish rack assembly with an angled
24 base and drainage spout designed to direct water runoff and promote faster drying of
25 dishware.
26

27 20. Defendant claims to own the ‘948 Patent by assignment and asserts
28 exclusive rights to license, sell, and enforce it. Relying on those rights, Defendant

1 initiated takedown actions against Plaintiff's Amazon listings, despite the fact that
2 Plaintiff's products do not infringe any valid claim of the '948 Patent. Upon
3 information and belief, Defendant's enforcement efforts are based on an
4 unreasonably broad and legally unsupported interpretation of the patent, undertaken
5 without adequate investigation or a good-faith basis.
6
7

8 21. At the same time, Defendant continues to sell its own dish drying
9 racks—branded as “Simplehuman”—on Amazon's marketplace, from which
10 Plaintiff's products have been removed. A true and correct copy of screenshots of
11 Defendant's product listings are attached hereto as Exhibit A.
12
13

14 22. This parallel sale of allegedly competing products, while attempting to
15 exclude Plaintiff through aggressive and unsupported patent assertions, has caused
16 significant commercial disruption to Plaintiff.
17

18 23. On or about March 29, 2025, Amazon issued separate takedown notices
19 to Plaintiff's subsidiaries, Fuzhou No Sugar Electronics Co., Ltd. and Fuzhou
20 Xiaohao Er Trading Co., Ltd., informing them that their respective dish drying rack
21 listings were removed due to a patent infringement complaint filed by Defendant
22 concerning the '948 Patent. Exhibit B and Exhibit C.
23
24

25 24. That same day, Amazon notified Plaintiff that multiple additional
26 listings for dish drying racks—under ASINs including, but not limited to,
27 B0BJ6DMDHB, B0CNVF5J4F, B0B4K1XH8Y, B0CQ72VWTN, B0CQ746LV6,
28

1 B0CNVFX7L5, B0CQ748XHS, B0CQ7D7BDZ, B0BMTZY9C1, B0CNND4PRS,
2 B0CNNGQZCS, B0CQFC6QRC, B0CNNGSK34, B0CQFH2G7Z,
3
4 B0DFYM56HW, B0BKZV6QC5, and B0CNNG4Y1Q—were subject to removal
5 based on the same complaint.
6

7 25. In its communications, Amazon advised that unless Defendant agreed
8 to participate in its APEX resolution program, voluntarily withdrew the complaint,
9 or Plaintiff obtained a court order affirming its right to sell the products, the listings
10 would remain deactivated. Defendant declined to participate in APEX and has not
11 withdrawn its claims. With no available administrative recourse, Plaintiff brings this
12 action seeking declaratory relief to prevent further harm to its sales, marketplace
13 visibility, and business reputation.
14
15

16 26. Defendant's course of conduct is not warranted under law, has
17 anticompetitive effects on the market, and restrains Plaintiff's ability to compete
18 fairly.
19
20

21 27. Plaintiff has at all times acted in good faith with respect to Defendant's
22 alleged patent rights. Plaintiff's Non-Infringing Products do not infringe the '948
23 Patent because none of the Non-Infringing Products possess all the elements and
24 limitations of any claim of the '948 Patent.
25
26
27
28

COUNT I

**DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF ONE OR
MORE CLAIMS OF THE ‘948 PATENT**

28. Plaintiff incorporates by reference the allegations set forth in paragraphs 1 through 27 of this Complaint as if fully restated herein.

29. Plaintiff avers that an actual, substantial, and continuing controversy exists between Plaintiff and Defendant regarding whether Plaintiff’s dish drying racks (“Accused Products”) infringe any valid claim of U.S. Patent No. 8,631,948 B2 (the “’948 Patent”). Defendant’s repeated infringement accusations—including formal complaints submitted to Amazon that resulted in the removal of Plaintiff’s listings—have created a real and immediate dispute. A judicial declaration is necessary to resolve this controversy and determine the parties’ respective rights and obligations under the patent laws of the United States.

30. Plaintiff avers that claim 1 of the ‘948 Patent recites, in relevant part:

A dish rack, comprising:

a body defining an interior having a structure for supporting dishes, the body having a bottom;

a leg supporting each corner of the body, providing a space below the bottom above a supporting surface on which the leg rests; and

a spout rotatably connected to an outlet of the bottom, in the space below the bottom, wherein the outlet is located away from edges of the bottom, wherein the bottom is configured such that water drained on the bottom is directed in a direction away from the edges towards the outlet to drain via the spout, wherein the spout is positionable between a first position in which the spout

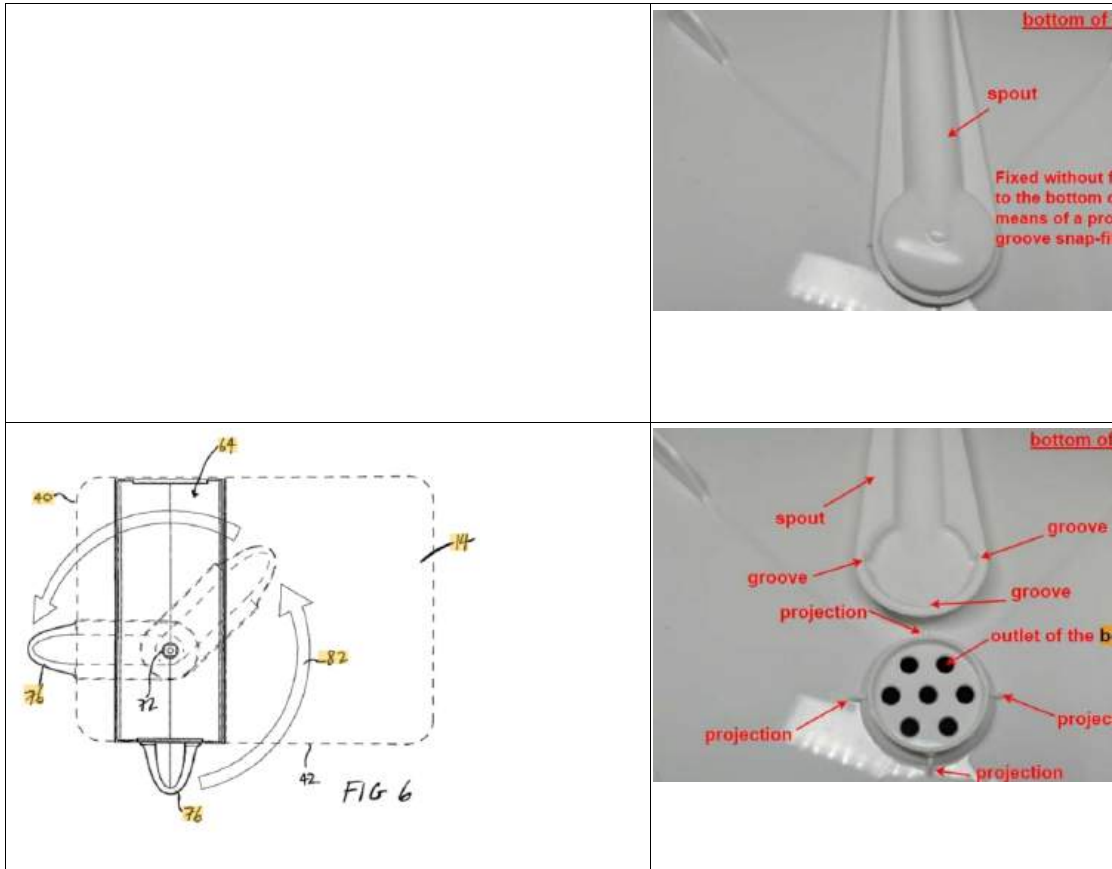
1 extends between a first pair of legs at a first side of the body and
2 a second position in which the spout extends between a second
3 pair of legs at a second side of the body orthogonal to the first
4 side of the body, wherein the spout extends beyond the edges of
5 the bottom at the first position and the second position, and
6 wherein the spout comprises an open channel structure wherein
7 sections along its longitudinal axis are open. (*Emphasis added to
8 highlight the limitation central to the non-infringement dispute*).

9 31. Plaintiff avers that the Accused Products do not infringe any valid
10 claim of the '948 Patent, either directly or indirectly, literally or under the doctrine
11 of equivalents. In particular, the Accused Products do not satisfy a key limitation of
12 claim 1: the requirement that the spout be "rotatably connected" to the outlet of the
13 bottom.

14 32. Plaintiff avers that in the Accused Products, the spout is not rotatably
15 connected in the manner claimed. Rather, the spout attaches via a fixed snap-fit
16 mechanism in each position and must be removed and reattached to switch
17 orientation. This configuration does not permit rotation while the spout remains
18 connected and therefore falls outside the scope of the asserted claims.
19
20
21

22
23 **The Rotatable Spout Connection**
24 **of the '948**
25 **Patent Reads On Figure**

Plaintiff, Accused
Product



33. Plaintiff avers that the '948 Patent's specification and prosecution history further confirm that the patentee disclaimed such remove-and-reattach mechanisms during examination. The patentee distinguished the prior art (including Moore) by arguing that the invention requires a spout capable of rotation *while connected*—a limitation absent in Plaintiff's design.

34. Plaintiff avers that prosecution history estoppel bars Defendant from now reclaiming, under the doctrine of equivalents, the very subject matter it disclaimed to secure issuance of the '948 Patent. Extending the doctrine of equivalents to cover Plaintiff's configuration would improperly recapture that surrendered subject matter.

1 35. Plaintiff avers that the Accused Products are substantially
2 different from the claimed invention, both under a literal reading of the claim
3 language and under the doctrine of equivalents. As a result, there is no
4 infringement of claim 1 of the '948 Patent.
5

6
7 36. Accordingly, Plaintiff avers that because claim 1 of the '948
8 Patent is not infringed, neither are dependent claims 2 through 14, which
9 incorporate all limitations of claim 1. *See Wahpeton Canvas Co. v. Frontier,*
10 *Inc.*, 870 F.2d 1546, 1552 n.9, 1553 (Fed. Cir. 1989). A more detailed claim-
11 by-claim analysis of the Accused Product's non-infringement is set forth in
12 Plaintiff's Dish Drying Rack Non-Infringement Contention, attached hereto
13 as Exhibit E.
14
15

16
17 37. Plaintiff avers that Defendant's unfounded infringement
18 allegations have caused concrete and ongoing harm to Plaintiff. Amazon
19 removed Plaintiff's listings from its marketplace, resulting in lost sales,
20 diminished goodwill, and immediate commercial disruption.
21

22
23 38. Plaintiff respectfully requests a judicial declaration that it does
24 not infringe any valid claim of the '948 Patent.
25

26
27 **COUNT II**
28 **(Declaratory Judgment of Invalidity of One or More Claims of the '948**
 Patent)

1 39. Plaintiff incorporates by reference the allegations set forth in
2 paragraphs 1 through 38 as if fully restated herein.
3

4 40. Plaintiff avers that the asserted claims of the '948 Patent are
5 invalid for failure to satisfy one or more conditions of patentability under the
6 Patent Act, including but not limited to 35 U.S.C. §§ 101, 102, 103, and/or
7 112. The claimed invention lacks novelty, is obvious in light of prior art, and
8 fails to meet statutory requirements for enablement and definiteness.
9
10

11 41. By way of example, and not limitation, Plaintiff avers that the
12 following references—each either alone or in combination—anticipate and/or
13 render obvious one or more claims of the '948 Patent:
14

15 F-1: U.S. Patent No. 591,377 to Bunce, issued October 12, 1897,
16 discloses a “dish-drainer” with drainage features.

17 F-2: U.S. Patent App. Pub. No. 2004/0238464 A1 to Cheung, published
18 December 2, 2004, discloses a draining tray promoting stability and
19 effective water runoff.

20 F-3: U.S. Patent No. 6,491,170 B1 to Madela, issued December 10,
21 2002, discloses a kitchen rack for drying utensils.

22 F-4: U.S. Patent No. 6,446,280 B1 to Moore, issued September 10,
23 2002, discloses a sink attachment for drainage.

24 F-5: JP Patent App. Pub. No. JP2004267285A to Noboru, published
25 September 30, 2004, discloses a draining component for dishware.

26 F-6: U.S. Patent App. Pub. No. 2007/0131629 A1 to Sullivan et al.,
27 published June 14, 2007, discloses a drying storage rack.
28

1 49. Plaintiff avers that these references, individually or in combination,
2 anticipate and/or render obvious one or more claims of the '948 Patent. The features
3 claimed in the '948 Patent are either disclosed directly or would have been obvious
4 to a person of ordinary skill in the art at the time of invention based on these earlier
5 disclosures. True and correct copies of the collection of prior art references cited in
6 support of this claim—including Bunce, Cheung, Madela, Moore, Noboru, and
7 Sullivan—are attached hereto as Exhibits F-K.
8
9
10

11 50. Plaintiff avers that the '948 Patent is invalid under the Patent Act,
12 including but not limited to 35 U.S.C. §§ 101, 102, 103, and 112.
13

14 51. Plaintiff further avers that, as a result of Defendant's assertion of the
15 invalid '948 Patent, it has suffered and continues to suffer substantial harm,
16 including loss of sales, business interruption, reputational injury, and the removal of
17 its product listings from Amazon's marketplace.
18
19

20 **COUNT III**
21 **Intentional Interference with Contractual Relations Under California Law**

22 52. Plaintiff incorporates by reference the allegations set forth in
23 paragraphs 1 through 51 of this Complaint as if fully restated herein.
24

25 53. Under California law, to state a claim for intentional interference with
26 contractual relations, a plaintiff must plead: (1) the existence of a valid contract
27 between the plaintiff and a third party; (2) the defendant's knowledge of that
28 contract; (3) intentional acts by the defendant designed to induce a breach or

1 disruption of the contractual relationship; (4) actual breach or disruption of the
2 contractual relationship; and (5) resulting damage. *See Quelimane Co. v. Stewart*
3 *Title Guaranty Co.*, 19 Cal. 4th 26, 55 (1998).
4

5 54. Plaintiff avers that, at all relevant times, it maintained a valid and
6 enforceable contract with Amazon, including the Amazon Services Business
7 Solutions Agreement, under which Plaintiff lawfully marketed and sold its products
8 on Amazon's marketplace. Defendant had knowledge of this contractual
9 relationship, as evidenced by the takedown notices it initiated and its familiarity
10 with Amazon's enforcement protocols.
11
12
13

14 55. Plaintiff further avers that Defendant intentionally undertook actions
15 designed to disrupt or interfere with this contractual relationship by submitting a
16 complaint to Amazon alleging that Plaintiff's products infringed the '948 Patent.
17 Defendant's complaint was filed without proper investigation, legal merit, or a
18 good-faith basis, and was motivated by an intent to suppress competition.
19
20

21 56. As a direct and proximate result of Defendant's actions, Amazon
22 removed Plaintiff's product listings and disrupted Plaintiff's contractual rights under
23 the Amazon agreement, materially impacting Plaintiff's ability to fulfill its
24 obligations and continue its commercial operations.
25
26
27
28

57. Plaintiff avers that it has suffered, and continues to suffer, substantial economic harm, including but not limited to lost revenue, loss of business opportunities, and reputational injury.

58. Defendant's conduct was knowing, intentional, malicious, and undertaken in conscious disregard of Plaintiff's rights, thereby entitling Plaintiff to punitive damages under California Civil Code § 3294.

59. Plaintiff avers that Defendant's improper conduct has directly impaired and continues to impair Plaintiff's subsidiaries' business activities and relationships with Amazon, causing commercial disruption and economic harm.

60. Plaintiff further avers that Defendant's submission of infringement complaints through Amazon was improper, made without legal justification or privilege, and was not a legitimate competitive act. Defendant's actions employed wrongful means, were not part of fair competition, and were undertaken with intent to interfere with Plaintiff's business.

61. By reason of the foregoing, Plaintiff seeks compensatory and punitive damages in an amount to be determined at trial, as well as any other equitable relief this Court deems just and proper.

COUNT IV
Unfair Competition Under California Business and Professions Code §§ 17200
et seq.

1 62. Plaintiff incorporates by reference the allegations set forth in
2 paragraphs 1 through 61 of this Complaint as if fully restated herein.
3

4 63. Plaintiff avers that Defendant offers for sale various consumer
5 products—including, upon information and belief, dish drying racks—on Amazon’s
6 online marketplace, in direct competition with Plaintiff’s Non-Infringing Products.
7

8 64. Plaintiff further avers that consumers have a right to fair competition
9 and access to diverse product choices in digital marketplaces such as Amazon. The
10 public interest is harmed when companies abuse enforcement mechanisms to
11 suppress lawful competitors.
12
13

14 65. Defendant has engaged in unlawful, unfair, and/or fraudulent business
15 practices in violation of California Business and Professions Code § 17200 et seq.,
16 including but not limited to submitting objectively baseless infringement complaints
17 to Amazon with the intent to remove Plaintiff’s listings, harm Plaintiff’s business
18 relationships, and eliminate competition.
19
20

21 66. As a direct and proximate result of Defendant’s misconduct, Plaintiff
22 has suffered injury in fact and lost money or property, including but not limited to
23 lost sales, impaired marketplace visibility, and disruption to established commercial
24 relationships.
25
26

27 67. Plaintiff seeks restitution of all funds wrongfully acquired by
28 Defendant and injunctive relief prohibiting Defendant from engaging in further

1 violations of the Unfair Competition Law, as authorized under California Business
2 and Professions Code §§ 17203 and 17204.
3

4 68. Plaintiff also seeks attorneys' fees, costs, and such other and further
5 relief as this Court deems just and proper.
6

7
8 **PRAYER FOR RELIEF**

9 WHEREFORE, Plaintiff respectfully requests that the Court enter judgment
10 in its favor and against Defendant as follows:
11

- 12 a) A declaratory judgment that Plaintiff has not infringed and is not infringing
13 any valid claim of the '948 Patent;
14
15 b) A declaratory judgment that the claims of the '948 Patent are invalid under
16 one or more provisions of the Patent Act, including 35 U.S.C. §§ 101, 102,
17 103, and/or 112;
18
19 c) Judgment in favor of Plaintiff on its claims for intentional interference with
20 contractual relations and unfair competition under California law;
21
22 d) Compensatory and punitive damages in an amount to be proven at trial;
23
24 e) Restitution and disgorgement of profits wrongfully acquired by Defendant as
25 a result of its unfair business practices;
26
27 f) Preliminary and permanent injunctive relief prohibiting Defendant from
28 continuing its unfair, unlawful, and fraudulent conduct;
g) An award of reasonable attorneys' fees and costs as permitted by law;

- 1 h) Pre- and post-judgment interest at the maximum rate permitted by law;
2
3 i) Such other and further relief as the Court may deem just and proper.
4

5 **JURY DEMAND**
6

7 Plaintiff demands a trial by jury on all issues so triable.
8

9 Dated: May 30, 2025

Respectfully submitted,

10 /s/ Kayla Herpers
11 Kayla Herpers, Esq.
12 Of Counsel
13 West Atlantic Law Firm, PLLC
14 104 West 40th Street, FL 4 & 5
15 New York, NY 10018
16 kaylaherpers@yahoo.com
17 Counsel for Plaintiff
18 Fuzhou FireEgg Electrical
19 Appliances Co., LTD., Fuzhou
20
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VERIFICATION

1 I, Xu Yixuan, hereby certify as follows:

2
3 1. I am the General Manager for Fuzhou Fireegg Electrical Appliances
4 Co., LTD. As such, I am authorized to make this Verification on Fuzhou Fireegg
5 Electrical Appliances Co., LTD., behalf.
6

7 2. I have read the foregoing Complaint and, based on my personal
8 knowledge and my knowledge of information reported to me by subordinates and
9 colleagues who report to me, the factual allegations contained in the Complaint are
10 true.
11

12
13 3. I certify under penalty of perjury under the laws of the United States of
14 America that the foregoing statements made by me are true and correct.
15
16

17 Executed in Shenzen China on May 29,
18
19 2025
20

21 /s/ Xu
22 Yixuan
23

24 General Manager
25 for Fuzhou
26 Fireegg Electrical
27 Appliances Co.,
28 LTD

EXHIBIT A

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4.7 3,808 ratings
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Color:

 \$99.95	 \$109.99	 \$109.99
--	---	--

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Compact (15" X 15.5" X 7.5")
Full-Size (20" X 22.3" X 11.5")

- Stainless Steel, Plastic
 - 20.2"D x 22.3"W x 11.5"H
 - simplehuman
 - Gray
 - Wine Glasses, Utensil, Dishware, Cutlery
- [See more](#)

-
- YOU WASH, I'LL DRY - simplehuman's steel frame dishrack has an innovative drainage system that includes an integrated drip tray with a swivel spout that pivots to keep water flowing directly into the sink, not onto the countertop.
- ANTI-RESIDUE COATING - Hydrophilic coating on plastic tray causes water to spread so that it dries more quickly and prevents residue buildup. Very clean and efficient.



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- **SWIVEL SPOUT** - Spout pivots to drain water directly into the sink from any side so you can position the dishrack long or short ways on the countertop and can be completely removed for easy cleaning.
- **SILICONE-CAPPED WIRE RACK** - Holds plates tightly without scratching or chipping.
- **WINE GLASS HOLDER** - Integrated wine glass rack safely hangs up to 4 extra-large Bordeaux wine glasses so they dry quickly and efficiently.
- **UTENSIL HOLDER** - Separate compartments keep utensils neat and organized.
- **EASY TO CLEAN** - Utensil holder and wire frame are top-rack dishwasher safe; clean all other parts with warm, soapy water.

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 1 sustainability feature

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+



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Get it as soon as **Monday, May 26**
FREE Shipping by Amazon




ROTOGOON Expandable Dish Drying Rack, Multifunctional Adjustable Dish Drainer with Swivel Spout and...
★★★★☆ 635
\$35⁹⁹
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon




PXYHMUS Black Stainless Steel Dish Drying Rack for Kitchen Counter, Space-Saving Dish...
★★★★☆ 49
Amazon's Choice
\$29⁹⁹
Get it as soon as **Monday, May 26**
FREE Shipping on orders over \$35 shipped by Amazon

Related Climate Pledge Friendly items


Page 1 of 3




Drying Mat for Kitchen Countertops, Coffee Mat Hide Stain Rubber Backed Absorbent Dish Drying...
★★★★☆ 1,020
Amazon's Choice
\$28⁹⁹
Get it as soon as **Monday, May 26**
FREE Shipping on orders over \$35 shipped by Amazon
🌱 1 sustainability feature ▼




HonestBaby Sleeveless and Cami Bodysuits One-piece 100% Organic Cotton for Baby Boys,...
★★★★☆ 611
-30% \$20⁹⁸
Limited time deal
List: \$29.99
Get it as soon as **Monday, May 26**
FREE Shipping on orders over \$35 shipped by Amazon
🌱 4 sustainability features ▼



Cozymood Velvet Pant Hangers 36 Packs Ultra Thin Hangers with Clips Non Slip Velvet Skirt...
★★★★☆ 827
Amazon's Choice
-5% \$37⁹⁹ (\$1.06/count)
Typical price: \$39.99
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon
🌱 3 sustainability features ▼



EKO Mini Desk Trash Can with Swing-Top Lid 0.4 Gallon Small Table Round Wastebasket for Office, Home, Car (White)
★★★★☆ 412
\$15⁹⁹
Get it as soon as **Saturday, Jun 7**
🌱 3 sustainability features ▼



GABRYLLY Ergonomic Office Chair, High Back Mesh Desk Chair with Adjustable Headrest, Fli...
★★★★☆ 14,660
Amazon's Choice
\$269⁵⁰
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon
🌱 3 sustainability features ▼

From the brand




Since 2000, our mission is to bring high-performance innovation to basic but essential tasks in our daily routine.

simplehuman

From the manufacturer

STEEL FRAME DISHRACK

Drains quickly and neatly — no puddles, water-spots or residue.

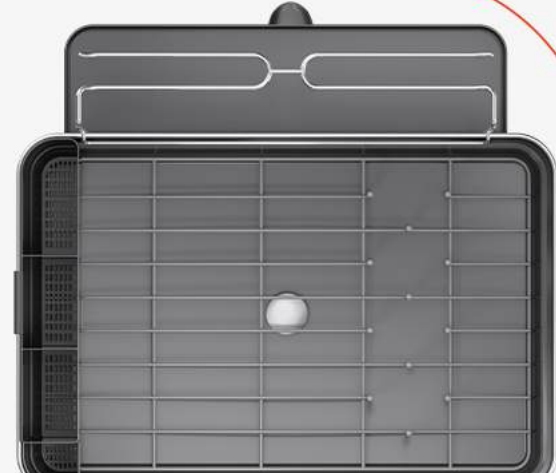


Swivel Spout

Moisture Control

Wine Glass Holder


Rust-Proof



SWIVEL


Pivots to drain into the sink — can be covered for easy clean

Shop the Dishwashing System




Standard Dishrack

Add to Cart



Sensor Pump with Caddy

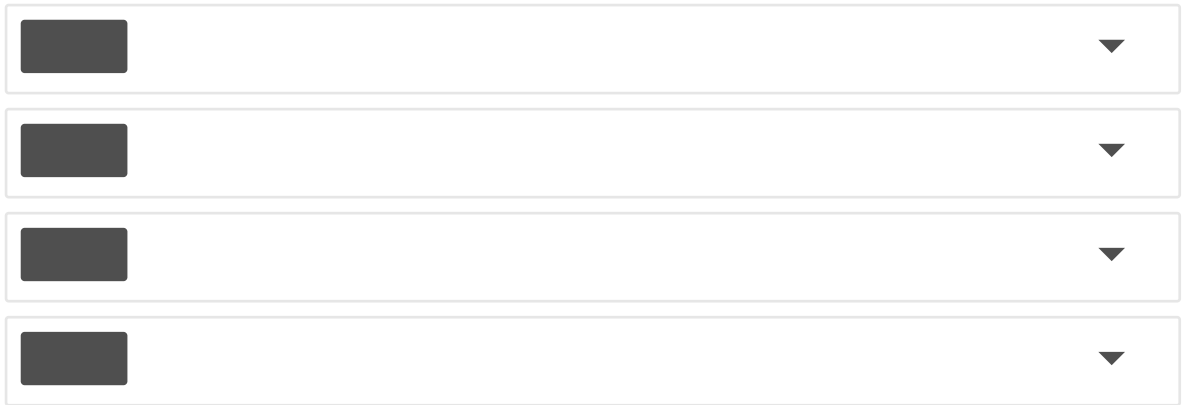
Buying Options



Citrus Blossom Dish Soap

Add to Cart

Customer Reviews	★★★★★ 3,808	★★★★★ 7	★★★★★ 167
Price	\$99 ⁹⁵		\$13 ⁷³
Type	Dishrack	Soap Dispenser	Dish Soap
Capacity	—	fl. oz.	34 fl. oz.
Sizes Available	Standard, Compact	oz. with Caddy, 9 oz	1pk, 2pk, 6pk
Colors	Brushed, White, Black	Brushed	—
Dishwashing Essentials	✓		✓



Videos

Page 1 of 3

Videos for this product

Drying Dish Rack

Kayla

2:14

Is this the best drying rack? My experience

Cole Schwartz

0:45

Simple human does it again!

SoCalSurfer

0:58

Upload your video

Product information




































































































Material	Stainless Steel, Plastic
Product Dimensions	20.2"D x 22.3"W x 11.5"H
Brand	simplehuman
Color	Gray
Recommended Uses For Product	Wine Glasses, Utensil, Dishware, Cutlery
Mounting Type	Countertop Mount
Item Weight	7 Pounds
Weight Limit	5.3 Pounds
Special Feature	Fingerprint proof, Rustproof, Utensil & Glass Holder, Moisture Control, 360 Degree Swivel Spout
Dish Drying Rack Location	On the Counter
Manufacturer	simplehuman
Size	Full-Size (20" X 22.3" X 11.5")
UPC	838810013916 838810021751
Global Trade Identification Number	00838810021751
Item Weight	7 pounds
ASIN	B08DG6VFWS

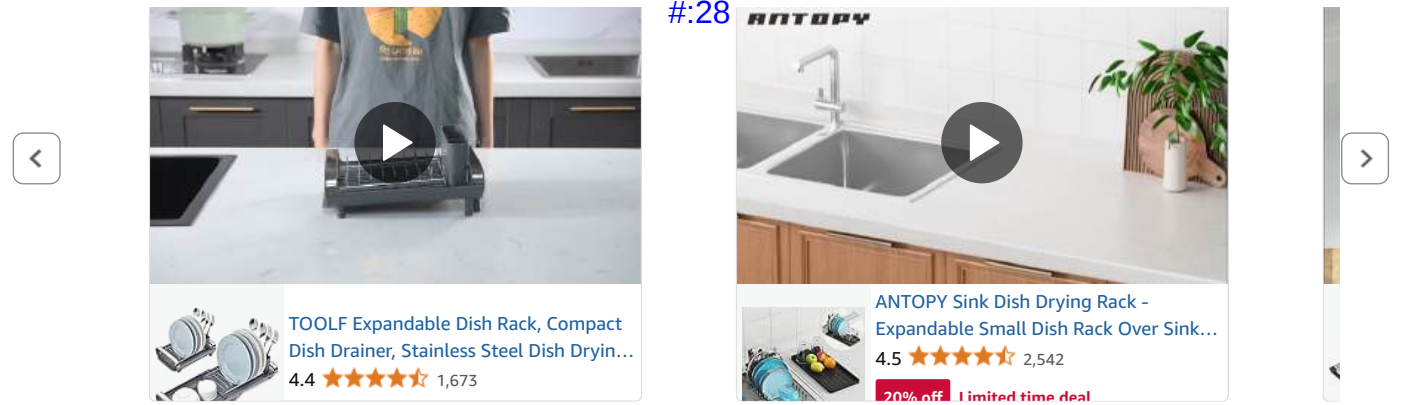
Warranty & Support

Manufacturer's warranty can be requested from customer service. [Click here](#) to make a request to customer service.

Feedback

Would you like to [tell us about a lower price?](#) ▼

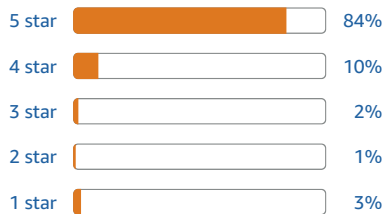
Country of Origin	China
Item model number	KT1181
Customer Reviews	4.7                                                                                                   



Customer reviews

★★★★☆ 4.7 out of 5

3,808 global ratings



How customer reviews and ratings work ▼

Review this product

Share your thoughts with other customers

Write a customer review

Customers say

Customers find the dish drying rack functional and appreciate its spacious design that accommodates pots and pans while saving counter space. The rack features a well-designed draining system that prevents water from dripping onto the countertop, and customers like its wine glass holders. Moreover, the build quality receives positive feedback, with customers noting it lasts for 10 years of hard use, and they find it easy to clean. However, opinions on value for money are mixed, with some finding it well worth the investment while others consider it pricey.

AI-generated from the text of customer reviews

Select to learn more

✓ Functionality | ✓ Size | ✓ Design | ✓ Build quality | ✓ Water drain | ✓ Ease of cleaning |
✓ Wine glass holder | Value for money

Reviews with images

See all photos >



Top reviews from the United States

Carri

★★★★★ I recommend!

Reviewed in the United States on March 26, 2025

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

I would never think of spending \$100. on a dish rack BUT I like quality and I'm in the kitchen alot. So some things are important to me! So far, the tongs for the glasses are still holding up and everything is in good shape. I have to have that side close to my sink so the water drips into it as it has no drip tray there. I've had this rack for about 2 years now. You will learn how to organize your dishes on it the more you use it. Some things fit better in certain places. I love the wine glass rack. Your nice glasses are out of the way from getting abused by heavier dishes. And there's a drip panel that you pull down to catch the water drops from those wine glasses. The silverware tray is very generous in size and holds a lot.

One person found this helpful

Helpful | Report

priscilla parnell

★★★★★ It's easy to clean

Reviewed in the United States on May 17, 2025

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

It's very sturdy. And stylish. Love it

Helpful | Report

Joanie

★★★★★ Water drains into sink

Reviewed in the United States on April 20, 2025

Color: Gray | Size: Compact (15" X 15.5" X 7.5") | **Verified Purchase**



★★★★★ **Calidad**

Reviewed in the United States on April 29, 2025

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**



★★★★★ **The Best Dish Rack ever!**

Reviewed in the United States on December 19, 2024

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**



▼ [Read more](#)



29 people found this helpful



★★★★☆ **Beautiful but tall!**

Reviewed in the United States on May 15, 2025

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**



★★★★★ **Excellent quality.**

Reviewed in the United States on April 12, 2025

Color: Gray | Size: Compact (15" X 15.5" X 7.5") | **Verified Purchase**



★★★★★ **This is perfect for my Kitchn**

Reviewed in the United States on February 27, 2025

Color: Gray | Size: Compact (15" X 15.5" X 7.5") | **Verified Purchase**

[See more reviews](#) >

Top reviews from other countries

Translate all reviews to English



Stephanie Obeid

★★★★★ **Perfect dish rack!**

Reviewed in Australia on August 8, 2021

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

This dish rack is amazing. It fits so much and doesn't leak at all. Definitely worth the money - it comes with a 5 year warranty.

Report



Sam

★★★★★ **A nice dish organizer**

Reviewed in the United Arab Emirates on September 9, 2022

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

High quality addition to the kitchen

Report



Cliente de Amazon

★★★★★ **Bueno, bonito y... no barato.**

Reviewed in Mexico on February 24, 2024

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

Los productos de Simplehuman son de mucha calidad, este escurridor en verdad está muy bien hecho, con buenos materiales, compacto, vistoso.

El precio es elevado, si tienes el presupuesto y no te duele desembolsar esta cantidad te lo recomiendo.

Report

[Translate review to English](#)



Mark Roberge

★★★★★ **"Simplehuman Kitchen Dish Drying Rack: A Must-Have for Every Home"**

Reviewed in Canada on September 25, 2023

Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

The simplehuman Kitchen Dish Drying Rack is a must-have for every home. This sleek and stylish dish rack is designed to make drying dishes a breeze. It features a sturdy steel frame that holds up to 12 plates, as well as a removable cutlery basket and wine glass holder. The rack also has a drip tray that catches water and prevents it from pooling on your countertop.

One of the best things about this dish rack is its compact size. It takes up minimal counter space, making it perfect for small kitchens or apartments. Despite its small size, it still provides plenty of room for drying dishes, and its unique design allows for maximum airflow, ensuring that your dishes dry quickly and efficiently.

Another great feature of the simplehuman Kitchen Dish Drying Rack is its ease of use. The rack is easy to assemble and disassemble, and it's dishwasher safe, making cleanup a breeze.

Overall, the simplehuman Kitchen Dish Drying Rack is an excellent product that makes drying dishes a

✓ [Read more](#)

Report



Amanda Dijanosic

★★★★★ **Worth the purchase price**

Reviewed in Singapore on September 16, 2023


Color: Gray | Size: Full-Size (20" X 22.3" X 11.5") | **Verified Purchase**

This dish drainer was recommended to me and now I will do the same to you! It is expensive, but the 'simple human' kitchen products are of very high quality and thoughtful design. I was so impressed I bought other kitchen equipment from them!! I would re-purchase.




Report


Videos for similar products




1:41




0:38






KitchenAid Large Capacity Full Size Rust Resistant Dish Rack with
★★★★★ 21,244
\$59⁹⁹




OXO Good Grips Aluminum Dish Rack, Gray
★★★★★ 1,431
\$54⁹⁵




Uracl Large
★★★
\$43⁹⁵

Customers who viewed items in your browsing history also viewed


Page 1 of 3




KitchenAid Large Capacity Full Size Rust Resistant Dish Rack with Angled Drain Board and Utensil Holder
★★★★★ 21,244
Amazon's Choice
\$59.99
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon




OXO Good Grips Aluminum Dish Rack, Gray
★★★★★ 1,431
\$54.95
Get it as soon as **Tuesday, May 27**
FREE Shipping by Amazon



Yamazaki Home Dish Rack with Removeable Drainer Tray, Kitchen Counter Dish Drying Organizer Holder Steel
★★★★★ 352
\$88.00
Get it **May 30 - Jun 3**
FREE Shipping




Joseph Joseph Extend Steel Expandable Dish Drying Rack with Removable Cutlery Holder Swivel Draining
★★★★★ 9,128
\$39.19
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon




Ewaiira Dish Drying Rack, 304 Stainless Steel Dish Racks for Kitchen Counter, Dish Drainers with Automatic Drainage
★★★★★ 33
\$59.99
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon

Best Sellers in Kitchen Storage & Organization


Page 1 of 5




Owala FreeSip Insulated Stainless Steel Water Bottle with Straw for Sports, Travel, and School
★★★★★ 72,056
#1 Best Seller in Kitchen & Dining
\$29.99
Get it as soon as **Monday, May 26**
FREE Shipping on orders over \$35 shipped by Amazon




Stanley Quencher H2.O Tumbler with Handle and Straw 30 oz | Flowstate 3-Position Lid | Cup Holder
★★★★★ 58,291
#1 Best Seller in Insulated Tumblers
\$35.00
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon



HydroJug Traveler - 40 oz Water Bottle with Handle & Flip Straw - Fits in Cup Holder, Leak Resistant Tumbler-Reusable
★★★★★ 8,999
\$39.99
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon



Hydro Flask Flex Straw Cap Agave
★★★★★ 9,733
Click for details
Get it as soon as **Monday, May 26**
FREE Shipping on orders over \$35 shipped by Amazon



Rubbermaid Brilliance Food Storage Containers BPA Free Airtight Lids Ideal for Lunch Meal Prep
★★★★★ 112,494
#1 Best Seller in Food Container Sets
\$37.25 (\$7.45/count)
Get it as soon as **Monday, May 26**
FREE Shipping by Amazon

See personalized recommendations

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New customer? [Start here.](#)

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Accessibility
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Amazon Science

Make Money with Us

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Sell apps on Amazon
Supply to Amazon
Protect & Build Your Brand
Become an Affiliate
Become a Delivery Driver
Start a Package Delivery Business
Advertise Your Products
Self-Publish with Us
Become an Amazon Hub Partner
› See More Ways to Make Money

Amazon Payment Products

Amazon Visa
Amazon Store Card
Amazon Secured Card
Amazon Business Card
Shop with Points
Credit Card Marketplace
Reload Your Balance
Gift Cards
Amazon Currency Converter

Let Us Help You

Your Account
Your Orders
Shipping Rates & Policies
Amazon Prime
Returns & Replacements
Manage Your Content and Devices
Recalls and Product Safety Alerts
Registry & Gift List
Help



English

United States

Amazon Music
Stream millions of songs

Amazon Ads
Reach customers wherever they spend their time

6pm
Score deals on fashion brands

AbeBooks
Books, art & collectibles

ACX
Audiobook Publishing Made Easy

Sell on Amazon
Start a Selling Account

Veeqo
Shipping Software Inventory Management

Amazon Business
Everything For Your Business

Amazon Fresh
Groceries & More Right To Your Door

AmazonGlobal
Ship Orders Internationally

Home Services
Experienced Pros Happiness Guarantee

Amazon Web Services
Scalable Cloud Computing Services

Audible
Listen to Books & Original Audio Performances

Box Office Mojo
Find Movie Box Office Data

Goodreads
Book reviews & recommendations

IMDb
Movies, TV & Celebrities

IMDbPro
Get Info Entertainment Professionals Need

Kindle Direct Publishing
Indie Digital & Print Publishing Made Easy

Amazon Photos
Unlimited Photo Storage Free With Prime

Prime Video Direct
Video Distribution Made Easy

Shopbop
Designer Fashion Brands

Amazon Resale
Great Deals on Quality Used Products

Whole Foods Market
America's Healthiest Grocery Store

Woot!
Deals and Shenanigans

Zappos
Shoes & Clothing

Ring
Smart Home Security Systems

eero WiFi
Stream 4K Video in Every Room


Blink
Smart Security for Every Home

Neighbors App
Real-Time Crime & Safety Alerts

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PillPack
Pharmacy Simplified

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Like-new products you can trust

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EXHIBIT B

< Performance notifications

March 29, 2025

Notice: Policy Warning



Hello,

We removed the listings below.

ASIN: B0BJ6DMDHB
B0CNVF5J4F
B0B4K1XH8Y
B0CQ72VWTN
B0CQ746LV6
B0CNVFX7L5
B0CQ748XHS
B0CQ7D7BDZ
Infringement type: Patent
IP asserted: 8,631,948
Complaint ID: 17496889071
Rights owner name: simplehuman
Rights owner email: fritz.schweitzer@farberllc.com

Why did this happen?

We removed some of your listings because we received a report from a rights owner alleging they may infringe upon their patent. This is against Amazon policies. Sellers on Amazon must comply with Amazon listing policies and are not allowed to sell products violating Amazon policies (<https://sellercentral.amazon.com/gp/help/external/201361070>).

How do I reactivate my listings?

To reactivate your listings, please send any of the documents listed below for us to review:

- A court order stating you are allowed to sell the products and hence are not violating Amazon policy for each of the listings mentioned in the deactivation notification.
- A letter of non-infringement from legal counsel.
- Work directly with the rights owner who reported the violation to submit a retraction. We may only accept retractions that the rights owner submits to us directly. We do not accept forwarded or attached retractions. These are the rights owner's contact details:
- Rights owner name: simplehuman
- Rights owner email: fritz.schweitzer@farberllc.com

Have your listings been removed in error?

If you believe there has been an error, please submit an explanation. Your explanation should include the following information:

- How the removed listings have not violated the Amazon Intellectual Property Policy.
- Evidence that shows the removed listings have complied with the Amazon Intellectual Property Policy.

How do I send the required information?

Go to Received Intellectual Property Complaints in the Product Policy Compliance section on Account Health

(https://sellercentral.amazon.com/performance/dashboard?ref=ah_em_mpa). Locate the deactivation record for the listings you want to appeal and click on the Appeal button next to the record to submit your appeal to reactivate your listings.

What happens if I do not send the requested information?

If we do not receive a response, the listings will remain removed and the violation record will remain on your Account Health page for up to 180 days after the notification or until the violation is addressed. Leaving this or other policy violations unaddressed may result in account deactivation.

We're here to help.

If you need help understanding why your listings may infringe the intellectual property rights of others, search for "Intellectual Property Policy" in Seller Central Help (<https://sellercentral.amazon.com/gp/help/external/201361070>). You may contact us for more information if required (<https://sellercentral.amazon.com/cu/contact-us>)

You can view your account performance

(https://sellercentral.amazon.com/performance/dashboard?ref=ah_em_mpa) or select Account Health on the home screen of the Amazon Seller app on your iOS or Android device. The Account Health page shows how well your account is performing against the performance metrics and policies required to sell on Amazon.

- Download the iOS app: <https://itunes.apple.com/us/app/amazon-seller/id794141485>
- Download the Android app: https://play.google.com/store/apps/details?id=com.amazon.sellermobile.android&hl=en_US

Thank you,

Amazon.com



EXHIBIT C

Performance notifications

March 29, 2025

Notice: Policy Warning



Hello,

We removed the listings below.

ASIN: B0BMTZY9C1
B0CNNND4PRS
B0CNNNGQZCS
B0CQFC6QRC
B0CNNNGSK34
B0CQFH2G7Z
B0DFYM56HW
B0BKZV6QC5
B0CNNNG4Y1Q
Infringement type: Patent
IP asserted: 8,631,948
Complaint ID: 17496846211
Rights owner name: simplehuman
Rights owner email: fritz.schweitzer@farberllc.com

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How do I reactivate my listings?

To reactivate your listings, please send any of the documents listed below for us to review:

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- A letter of non-infringement from legal counsel.
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- Rights owner name: simplehuman
- Rights owner email: fritz.schweitzer@farberllc.com

Have your listings been removed in error?

If you believe there has been an error, please submit an explanation. Your explanation should include the following information:

- How the removed listings have not violated the Amazon Intellectual Property Policy.
- Evidence that shows the removed listings have complied with the Amazon Intellectual Property Policy.

How do I send the required information?

Go to Received Intellectual Property Complaints in the Product Policy Compliance section on Account Health (https://sellercentral.amazon.com/performance/dashboard?ref=ah_em_mpa). Locate the deactivation record for the listings you want to appeal and click on the Appeal button next to the record to submit your appeal to reactivate your listings.

What happens if I do not send the requested information?

If we do not receive a response, the listings will remain removed and the violation record will remain on your Account Health page for up to 180 days after the notification or until the violation is addressed. Leaving this or other policy violations unaddressed may result in account deactivation.

We're here to help.

If you need help understanding why your listings may infringe the intellectual property rights of others, search for "Intellectual Property Policy" in Seller Central Help (<https://sellercentral.amazon.com/gp/help/external/201361070>). You may contact us for more information if required (<https://sellercentral.amazon.com/cu/contact-us>)

You can view your account performance

(https://sellercentral.amazon.com/performance/dashboard?ref=ah_em_mpa) or select Account Health on the home screen of the Amazon Seller app on your iOS or Android device. The Account Health page shows how well your account is performing against the performance metrics and policies required to sell on Amazon.

- Download the iOS app: <https://itunes.apple.com/us/app/amazon-seller/id794141485>
- Download the Android app: https://play.google.com/store/apps/details?id=com.amazon.sellermobile.android&hl=en_US

Thank you,

Amazon.com



EXHIBIT D



US008631948B2

(12) **United States Patent**
Yang et al.

(10) **Patent No.:** **US 8,631,948 B2**
(45) **Date of Patent:** ***Jan. 21, 2014**

(54) **DISH RACK WITH ADJUSTABLE SPOUT AND
REMOVABLE DRIP TRAY**

(75) Inventors: **Frank Yang**, Rancho Palos Verdes, CA
(US); **Joseph Sandor**, Santa Ana
Heights, CA (US); **Chih-Hong Hsieh**,
West Covina, CA (US)

(73) Assignee: **Simplehuman LLC**, Torrance, CA (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-
claimer.

(21) Appl. No.: **13/324,796**

(22) Filed: **Dec. 13, 2011**

(65) **Prior Publication Data**

US 2012/0085715 A1 Apr. 12, 2012

Related U.S. Application Data

(63) Continuation of application No. 11/601,441, filed on
Nov. 17, 2006, now Pat. No. 8,074,813.

(51) **Int. Cl.**
A47G 19/08 (2006.01)

(52) **U.S. Cl.**
USPC **211/41.3; 211/41.4**

(58) **Field of Classification Search**
USPC 211/41.1-41.9, 85.25, 85.21; 220/487,
220/488, 572; 4/654, 656; D32/3, 55;
134/56 D, 57 D, 58 D

See application file for complete search history.

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Primary Examiner — Jonathan Liu

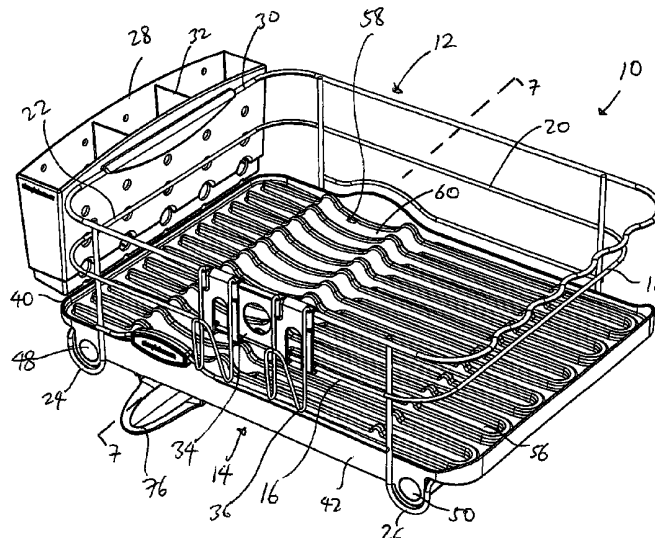
Assistant Examiner — Patrick Hawn

(74) *Attorney, Agent, or Firm* — Liu & Liu

(57) **ABSTRACT**

A dish rack has a wireframe, a drip tray having a base and a
dish-receiving region provided on the base, and a drain chan-
nel that is removably coupled to the bottom of the base at the
location of the dish-receiving region.

14 Claims, 8 Drawing Sheets



US 8,631,948 B2

Page 2

(56)

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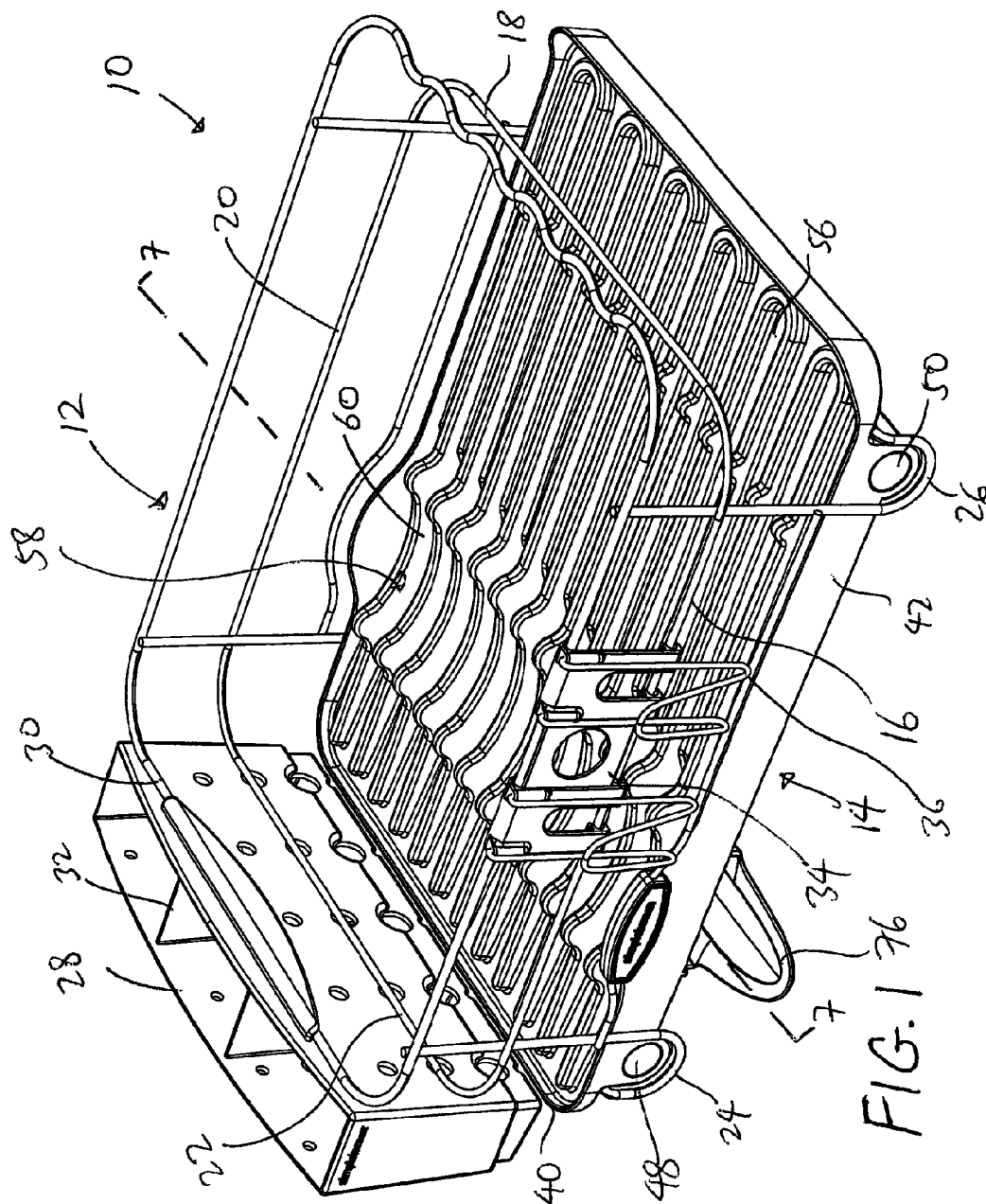
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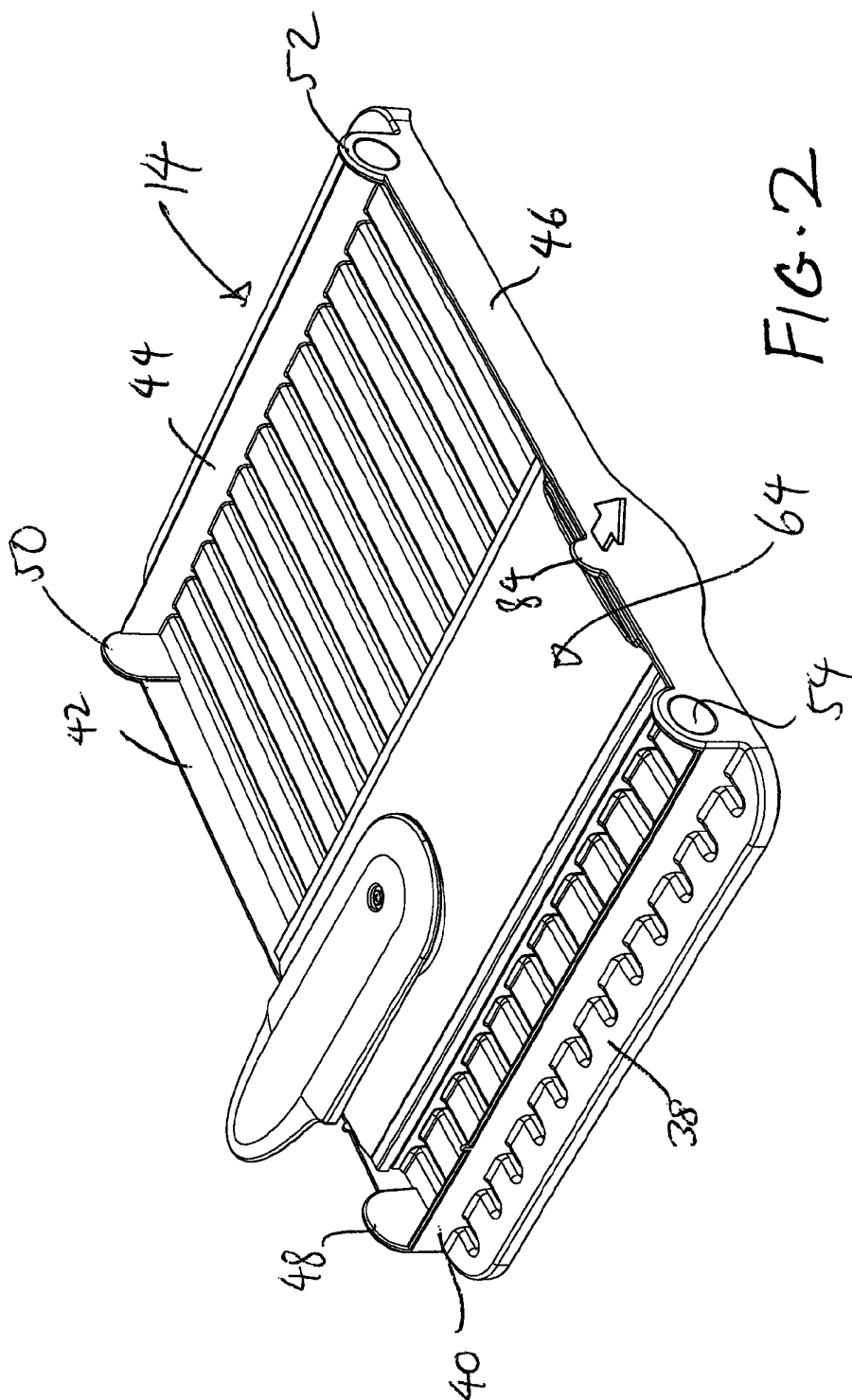


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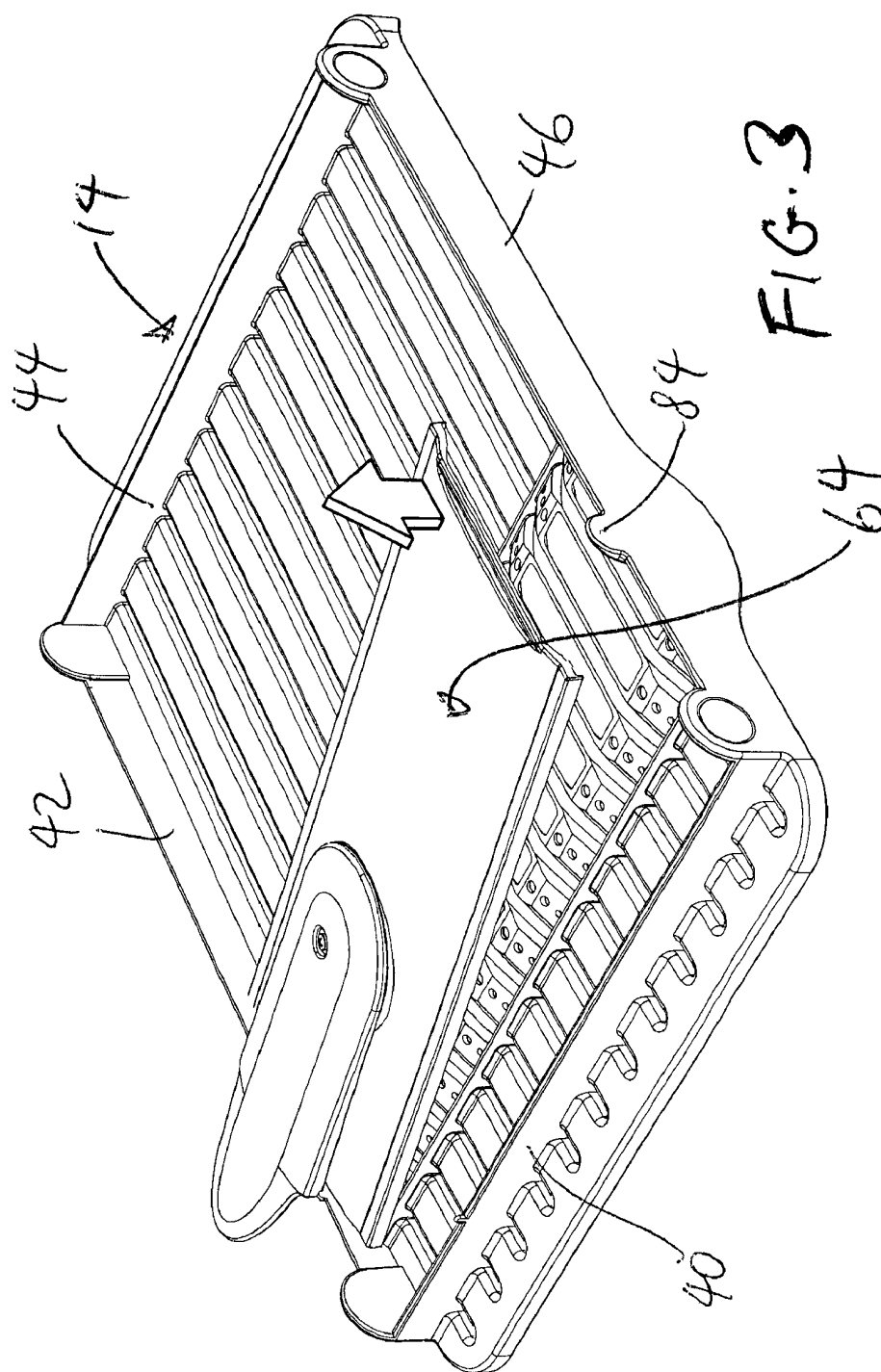


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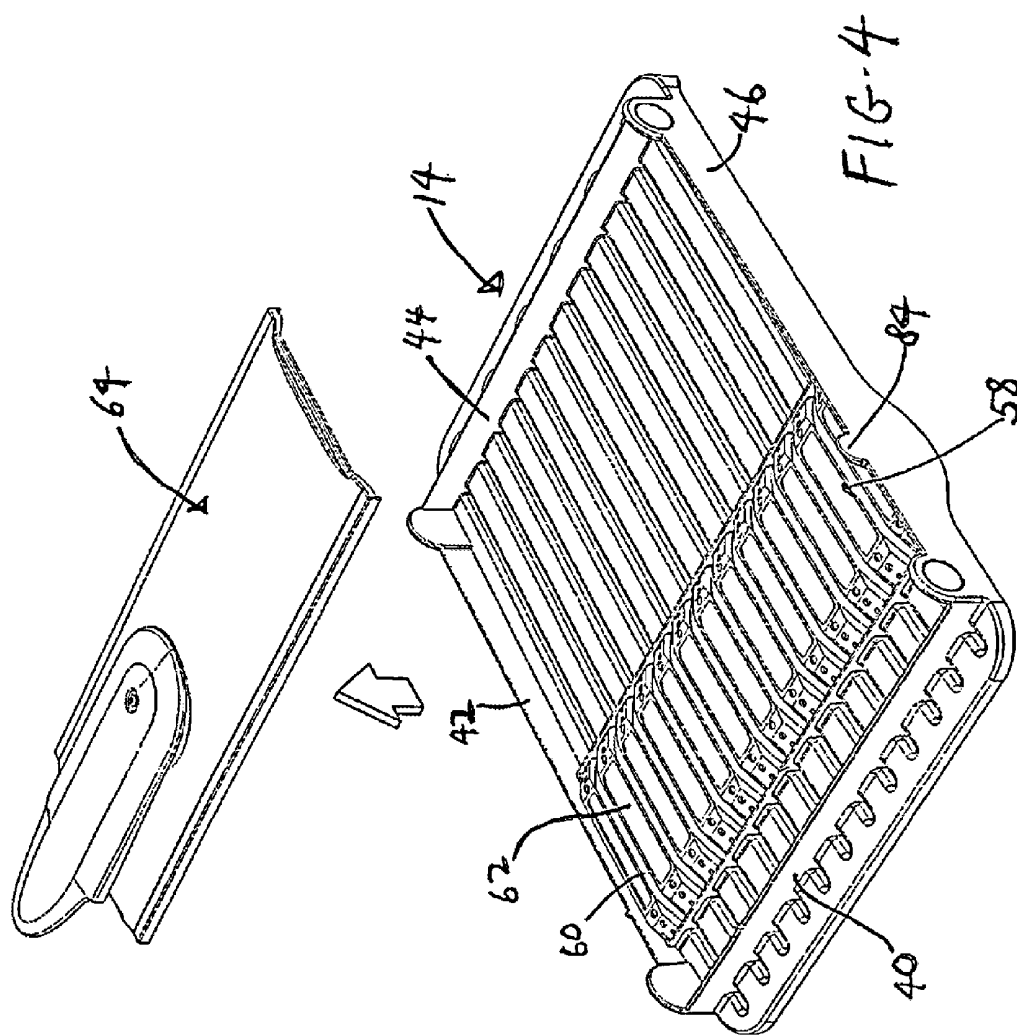


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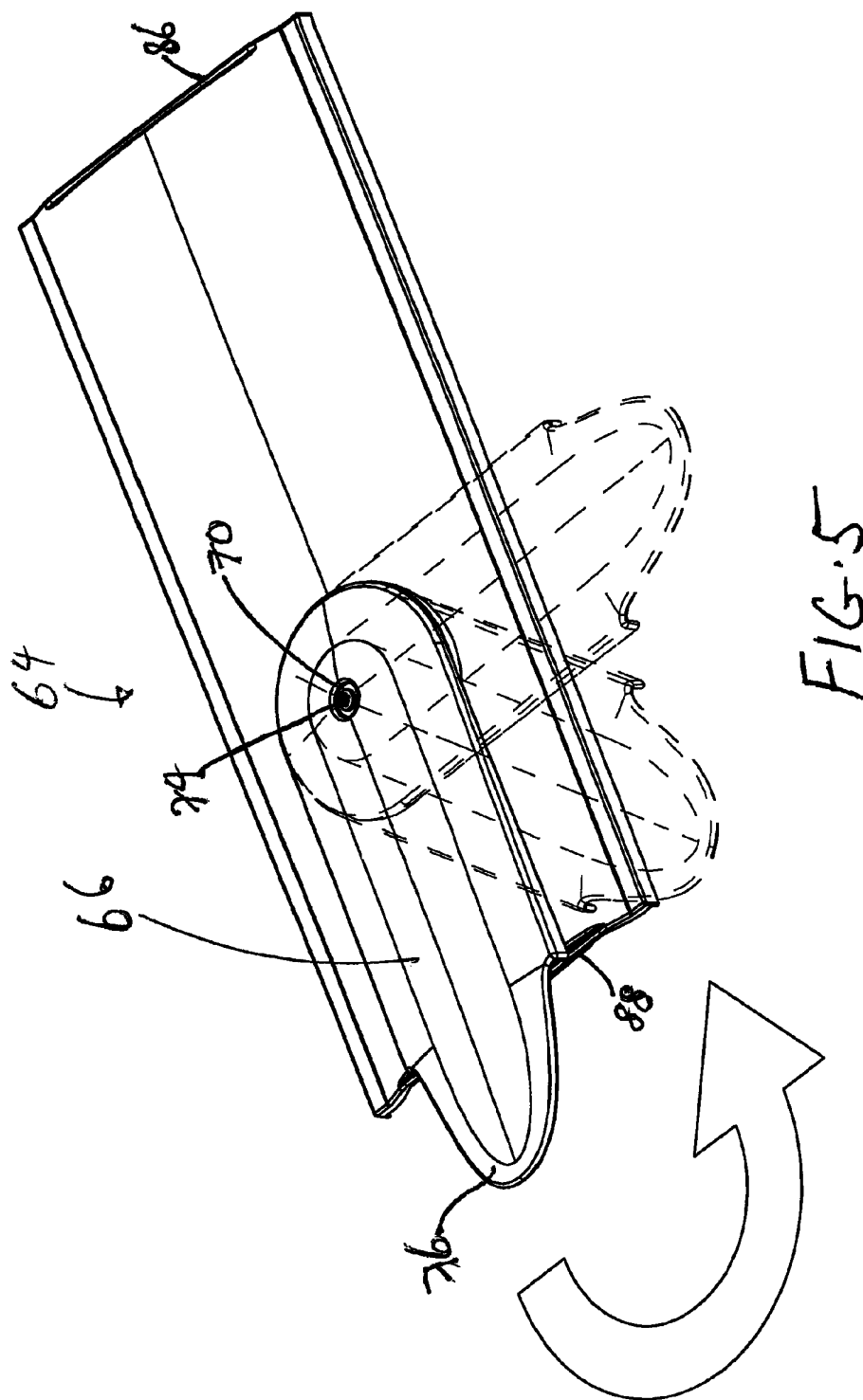


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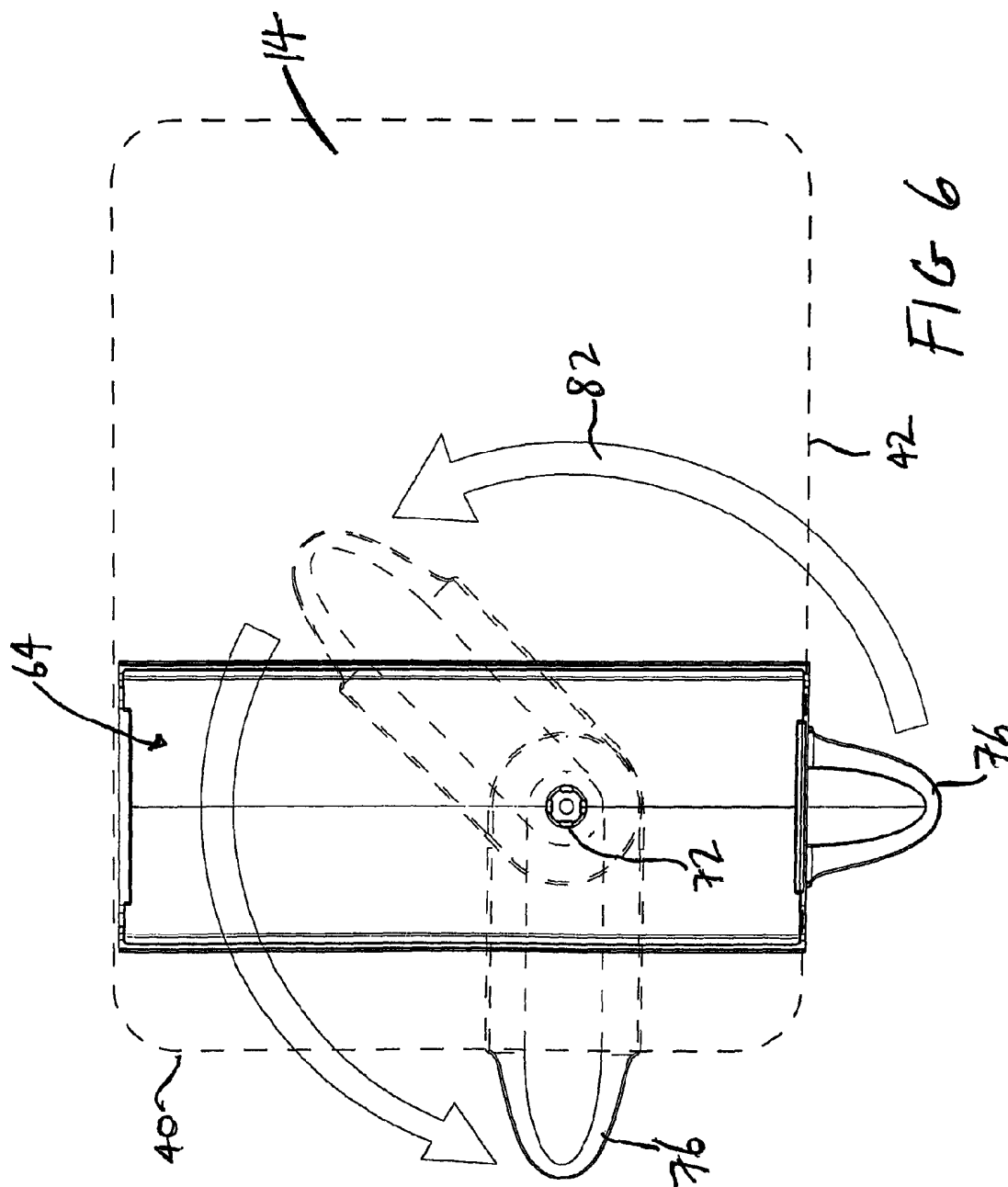


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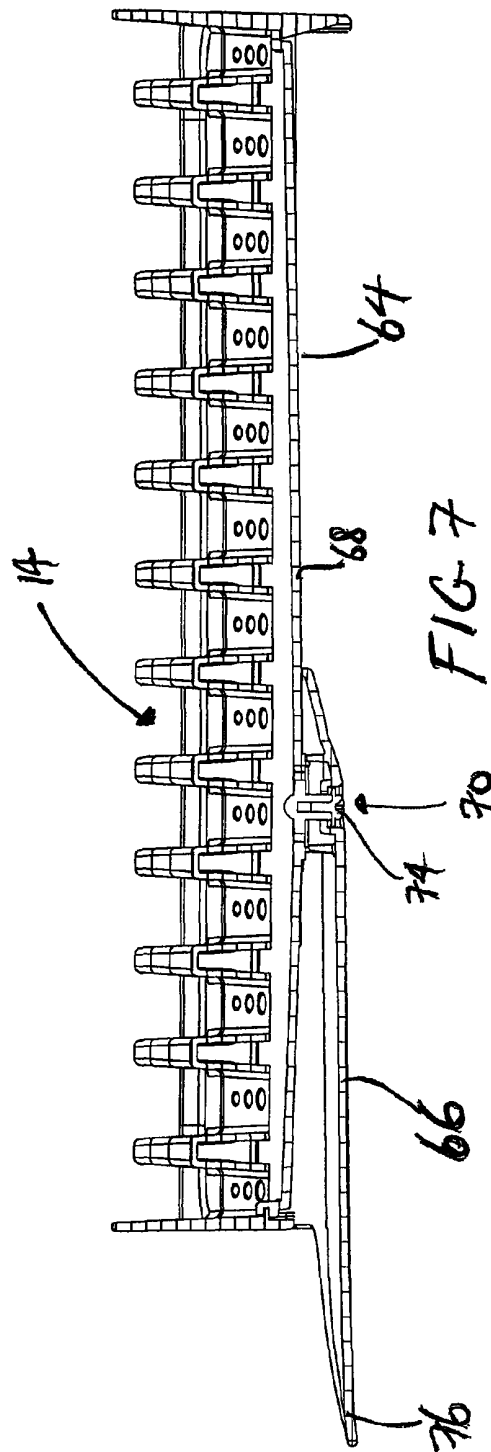


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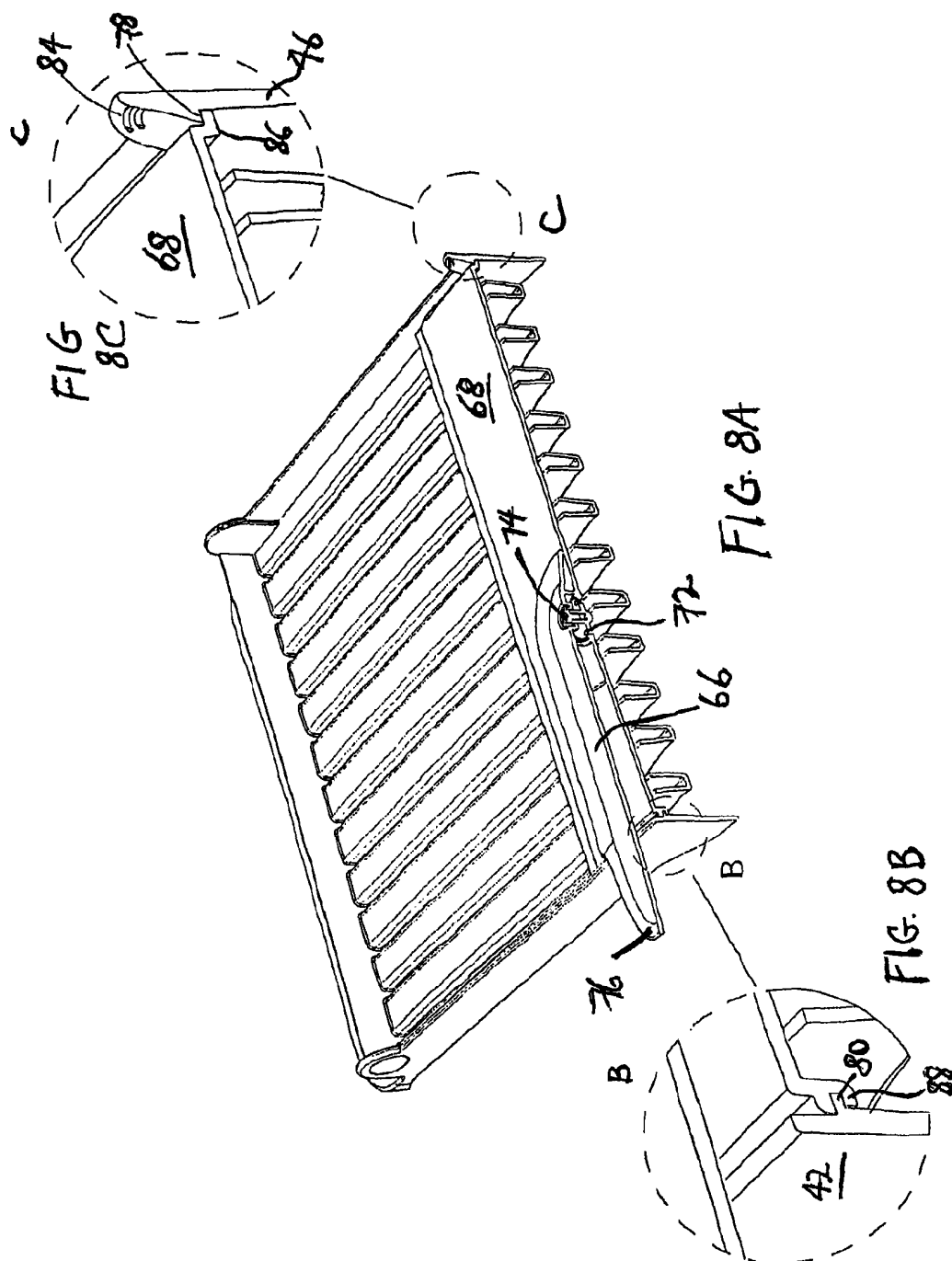


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1

DISH RACK WITH ADJUSTABLE SPOUT AND REMOVABLE DRIP TRAY

This application is a Continuation of U.S. patent application Ser. No. 11/601,441, filed Nov. 17, 2006. This application is incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to dish racks, and in particular, to a dish rack having a removable drip tray. The drip tray can include an adjustable spout.

2. Description of the Prior Art

Dish racks are commonly used on kitchen countertops for positioning plates, bowls, cups and utensils to let them dry after they have been washed. The water from the washed plates, bowls, cups and utensils will typically drip on to the base of the dish rack, and the water can be drained to the kitchen sink by tilting the base.

Unfortunately, these conventional dish racks suffer from several drawbacks. First, they lack an effective way of draining the water collected on the base to the kitchen sink. Tilting the base can be difficult (and dangerous) if the dish rack is fully loaded with dishes, bowls, utensils and other items.

Second, the conventional dish racks are typically positioned on a countertop adjacent the kitchen sink. Unfortunately, if the dish rack is inadvertently pushed or rattled (e.g., by a user, a child or a pet), the water that has collected on the base may be splashed out of the base on to the countertop or the floor.

Thus, there remains a need for a dish rack that can effectively drain the water collected on the base.

SUMMARY OF THE DISCLOSURE

It is an object of the present invention to provide a dish rack that effectively drains water that has been collected on a base or a tray.

It is another object of the present invention to provide a dish rack that can be used in different counter-top situations.

In order to accomplish the objects of the present invention, the present invention provides a dish rack having a wireframe, a drip tray having a base and a dish-receiving region provided on the base. The dish rack includes a drain channel that is removably coupled to the bottom of the base at the location of the dish-receiving region.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top perspective view of a dish rack according to one embodiment of the present invention.

FIG. 2 is a bottom perspective view of the drip tray of the dish rack of FIG. 1.

FIG. 3 is an exploded bottom perspective view of the drip tray of FIG. 2 showing the drain channel partially separated from the drip tray.

FIG. 4 is an exploded bottom perspective view of the drip tray of FIG. 2 showing the drain channel completely separated from the drip tray.

FIG. 5 is a bottom perspective view of the drain channel of the dish rack of FIG. 1.

FIG. 6 is a top view of the drain channel of FIG. 5 shown in the context of the drip tray of FIG. 1.

FIG. 7 is a side cross-sectional view of the drip tray of FIG. 1 taken along line 7-7 thereof.

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FIG. 8A is a bottom perspective cross-sectional view of the drip tray of FIG. 1.

FIG. 8B is an enlarged sectional view of the region B in FIG. 8A.

FIG. 8C is an enlarged sectional view of the region C in FIG. 8A.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The following detailed description is of the best presently contemplated modes of carrying out the invention. This description is not to be taken in a limiting sense, but is made merely for the purpose of illustrating general principles of embodiments of the invention. The scope of the invention is best defined by the appended claims.

FIG. 1 illustrates a dish rack 10 having a generally four-sided (e.g., rectangular) configuration. The dish rack 10 has a wireframe 12 and a drip tray 14. The wireframe 12 can be made of stainless steel or other similar metal, with the wires of the wireframe 12 defining four sides 16, 18, 20 and 22. The wireframe 12 defines four legs, with one leg at each corner of the wireframe 12, and with only two legs 24 and 26 being shown in FIG. 1.

Any number of accessories can be provided with the dish rack 10. For example, a collector tray 28 can be suspended from a top wire 30 on the side 22 of the wireframe 12. The collector tray 28 can be made of plastic, and have four walls that define an interior space that can be further divided into separate sections by dividing walls 32. The collector tray 28 can be used to hold knives, forks, spoons, and other utensils, and can even hold baby bottle nipples and other smaller washable items. As another example, a cup or wine glass holder 34 can be suspended from the top wire 30 on the side 16 of the wireframe 12. The holder 34 can be made of plastic, and have U-shaped stainless steel hooks 36 that are adapted to hold inverted cups or glasses.

Referring also to FIGS. 2-4 and 7-8, a removable drip tray 14 can be positioned at the bottom of the wireframe 12. The drip tray 14 can be made of a different material from the wireframe 12, such as plastic. The drip tray 14 has a base 38 that has four short walls 40, 42, 44, 46 extending downwardly therefrom, with legs 48, 50, 52, 54 extending from these walls 40, 42, 44, 46 to elevate the base 38 when the legs 48, 50, 52, 54 are placed on a flat surface (e.g., a kitchen counter-top). The legs 48, 50, 52, 54 are adapted to be fitted on the wireframe either adjacent to, or on, corresponding legs 24, 26 in the wireframe 12. Referring to FIG. 1, a plurality of elongated grooves 56 can be provided (e.g., molded) from the top surface of the base 38, and are adapted to guide water towards a dish-receiving region 58. Specifically, the base 38 is angled from the walls 40 and 44 towards the dish-receiving region 58 so that water that has collected on the base 38 can be guided by the grooves 56 to flow to the dish-receiving region 58. The dish-receiving region 58 is formed in the base 38 at a location that is closer to one wall 40 than to the opposite wall 44. A plurality of dish-dividing walls 60 is provided at the dish-receiving region 58, and corresponding elongated openings 62 are provided in the base 38 between each pair of dish-dividing walls 60. The dish-dividing walls 60 can extend slightly below the horizontal plane of the base 38, as best shown in FIGS. 3 and 4. Thus, a dish (not shown) can be received between two adjacent dish-dividing walls 60, with an edge of the dish extending through the elongated opening 62.

Referring also to FIGS. 5-7, a drain channel 64 can be removably attached to the bottom of the drip tray 14 at a

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location below the dish-receiving region 58. The drain channel 64 has a concave spout 66 that is angled downwardly with respect to the horizontal plane of the drip tray 14, so that the spout 66 can be adapted to allow water that has collected on the base 38 to be directed to a kitchen sink. In particular, the water on the base 38 flows along the grooves 56 to the dish-receiving region 58 where the water is then flowed through the elongated openings 62 to the drain channel 64. As best shown in FIG. 7, the base 68 of the drain channel 64 is angled downwardly from its side edges towards an outlet 70 that is positioned at the lowest vertical point of the drain channel 64. This will allow water on the drain channel 64 to flow towards the outlet 70. The water passes through openings 72 (see FIG. 6) in the outlet 70 to the spout 66 where the water can flow down the spout 66.

The spout 66 is rotatably connected to the drain channel 64 at the location of the outlet 70. As shown in FIGS. 5, 6 and 7, a screw 74 can be used to connect the spout 66 to the base 68 of the drain channel 64. The spout 66 can be rotated to position the outlet 76 of the spout 66 at one of two different walls 40 or 42 of the drip tray 14. Specifically, the outlet 76 of the spout 66 can be positioned along the wall 42 (see FIGS. 1 and 6) of the drip tray 14 if the wall 42 is positioned adjacent a kitchen sink. On the other hand, the outlet 76 of the spout 66 can be positioned along the wall 40 (see FIG. 1) of the drip tray 14 if the wall 40 is positioned adjacent a kitchen sink. Thus, by allowing the spout 66 to be adjusted to be positioned adjacent both the longer wall 42 and the shorter wall 40, the dish rack 10 can be positioned adjacent the kitchen sink in any kitchen to adapt to different counter-top situations in different households.

The spout 66 can be rotated through an angle of 270 degrees, as shown by the arrow 82 in FIG. 6. In this regard, the presence of the leg 48 blocks the shorter 90 degree rotation path of the spout 66 from the wall 42 to the wall 40, so the spout 66 needs to be rotated through an angle of 270 degrees, as shown by the arrow 82 in FIG. 6. As an alternative, the drain channel 64 can be removed from the drip tray 14 and the spout 66 rotated in any manner desired before re-attaching the drain channel 64 to the drip tray 14.

FIGS. 2-4, 7 and 8A-8C illustrate how the drain channel 64 is removably attached to the drip tray 14. Referring to FIGS. 8A and 8C, a tab 84 is provided along the wall 46 at the dish-receiving region 58. The tab 84 has a step 78 at the location where the tab 84 transitions into the wall 46. Referring to FIGS. 8A and 8B, the opposing wall 42 has a flange 80. In addition, one end of the drain channel 64 has a shoulder 86 which is adapted to be snap-fitted under the step 78, and the other end of the drain channel 64 has a gripping piece 88 that has an internal space for receiving the flange 80. To attach the drain channel 64 to the drip tray 14, the user first fits the flange 80 into the space defined by the gripping piece 88 (see FIG. 8B), and then pushes the drain channel 64 against the bottom of the drip tray 14 until the shoulder 86 is snap-fitted under the step 78 (see FIG. 8C). To detach the drain channel 64 from the drip tray 14, the user pushes on the tab 84 to release the shoulder 86 from the step 78, thereby allowing the user to slide the gripping piece 88 away from the flange 80. Even though the present invention describes one embodiment for removably connecting the drain channel 64 to the drip tray 14, other connection mechanisms can be utilized without departing from the scope of the present invention.

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While the description above refers to particular embodiments of the present invention, it will be understood that many modifications may be made without departing from the spirit thereof. The accompanying claims are intended to cover such modifications as would fall within the true scope and spirit of the present invention. For example, the spout 66 does not need to be rotatable.

What is claimed is:

1. A dish rack, comprising:

a body defining an interior having a structure for supporting dishes, the body having a bottom;

a leg supporting each corner of the body, providing a space below the bottom above a supporting surface on which the leg rests; and

a spout rotatably connected to an outlet of the bottom, in the space below the bottom, wherein the outlet is located away from edges of the bottom, wherein the bottom is configured such that water drained on the bottom is directed in a direction away from the edges towards the outlet to drain via the spout, wherein the spout is positionable between a first position in which the spout extends between a first pair of legs at a first side of the body and a second position in which the spout extends between a second pair of legs at a second side of the body orthogonal to the first side of the body, wherein the spout extends beyond the edges of the bottom at the first position and the second position, and wherein the spout comprises an open channel structure wherein sections along its longitudinal axis are open.

2. The dish rack as in claim 1, wherein the first pair of legs and the second pair of legs share a common leg.

3. The dish rack as in claim 1, wherein the body comprises a wire frame.

4. The dish rack as in claim 3, wherein the body comprises a drip tray having a base, and the bottom is defined by the base of the drip tray.

5. The dish rack as in claim 4, wherein the drip tray is removably supported by the wireframe.

6. The dish rack as in claim 5, wherein the drip tray comprises a longitudinal drain channel that is removably coupled to and supported from the base of the drip tray, and the spout is rotatably coupled to the bottom of the drain channel.

7. The dish rack as in claim 5, wherein the structure for supporting dishes is provided on the drip tray.

8. The dish rack as in claim 1, wherein the structure for supporting dishes is made of a plastic material.

9. The dish rack as in claim 1, wherein the spout is pivotally attached to the bottom of the body.

10. The dish rack as in claim 9, wherein the spout is pivotally attached to the bottom of the body for rotation of the spout about a pivot axis, and wherein the spout is positionable between the first and second positions by rotating the spout about the pivot axis.

11. The dish rack as in claim 10, wherein an opening is provided along the pivot axis to allow water to drain from the bottom of the body to the spout.

12. The dish rack as in claim 11, wherein the spout comprises an open channel structure.


13. The dish rack as in claim 1, wherein the spout has an open concave longitudinal channel structure.

14. The dish rack as in claim 6, wherein the spout has an open concave longitudinal channel structure.

* * * * *

EXHIBIT E

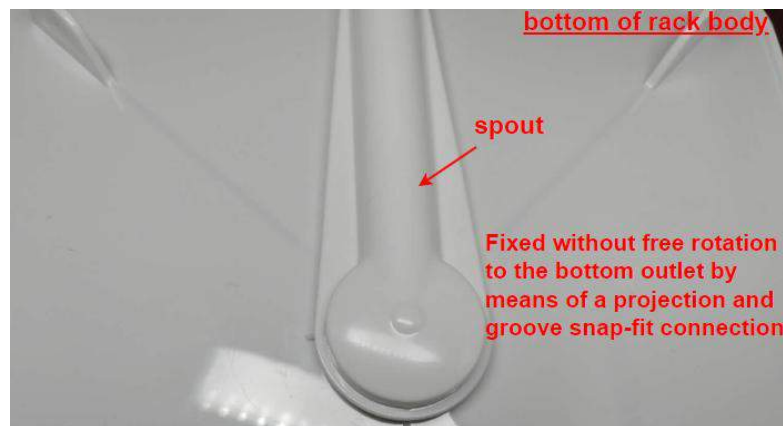
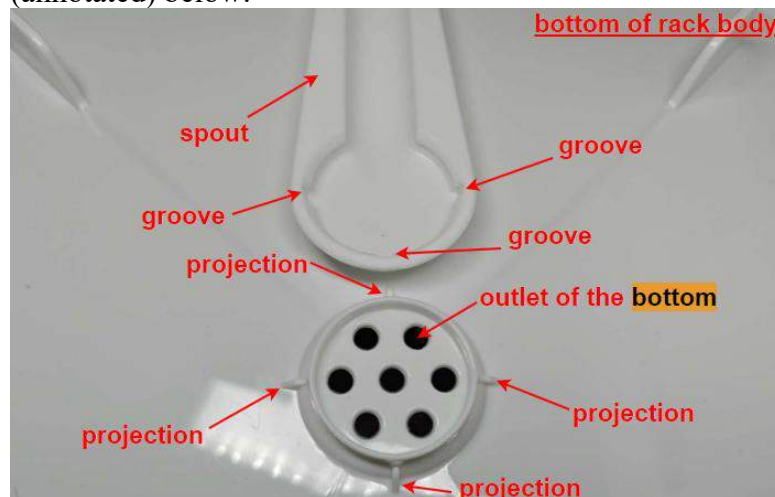
Plaintiffs' Dish Drying Rack Non-infringement contention -US Pat. No. 8,631,948 ('948 patent)

Claims 1-14 of 948 Patent	Plaintiffs' Dish Drying Rack Non-infringement contention
<p>1. A dish rack, comprising:</p> <p>a body defining an interior having a structure for supporting dishes, the body having a bottom;</p> <p>a leg supporting each corner of the body, providing a space below the bottom above a supporting surface on which the leg rests; and</p> <p>a spout rotatably connected to an outlet of the bottom, in the space below the bottom, wherein the outlet is located away from edges of the bottom, wherein the bottom is configured such that water drained on the bottom is directed in a direction away from the edges towards the outlet to drain via the spout,</p> <p>wherein the spout is positionable between a first position in which the spout extends between a first pair of legs at a first side of the body and a second position in which the spout extends between a second pair of legs at a second side of the body orthogonal to the first side of the body, wherein</p>	<p>I. INTRODUCTION</p> <p>The Plaintiffs' Dish Drying Rack does not infringe claim 1 of the '948 Patent, either literally or under the doctrine of equivalents, because, <i>inter alia</i>, its spout is not "rotatably connected" to the bottom outlet as claimed by the claim 1 and properly construed in light of the '948 patent's specification and prosecution history.</p> <p>II. THE ACCUSED PRODUCT: PLAINTIFFS' DISH DRYING RACK</p> <p>The Accused Product, the Plaintiffs' Dish Drying Rack, includes a dish rack frame, legs, and a spout designed to direct water away from the rack. The spout can be positioned to drain water towards different sides of the rack. <i>See</i> Plaintiffs' Dish Drying Rack's figure (annotated) below:</p>  <p>However, the connection mechanism between the spout and the rack's bottom outlet fundamentally differs from the claimed invention. The Plaintiffs' spout connects to the rack bottom outlet via a snap-fit mechanism, utilizing projections on the bottom outlet that engage with corresponding grooves on the spout. When engaged, this snap-fit connection securely fixes the spout in a chosen position relative to the outlet. To change the spout's position, a user must apply force to disengage the snap-fit connection, physically remove the spout from the outlet, reorient the spout to the desired direction, and then re-engage the snap-fit mechanism by pressing the spout back onto the outlet until the</p>

the spout extends beyond the edges of the bottom at the first position and the second position, and

wherein the spout comprises an open channel structure wherein sections along its longitudinal axis are open.

projections lock into the grooves. The spout is not capable of rotation *while* it remains connected to the bottom outlet. *See* Plaintiffs' figure (annotated) below:



III. CLAIM CONSTRUCTION OF "ROTATABLY CONNECTED"

Independent Claim 1 of the '948 Patent recites, in relevant part: "a spout **rotatably connected** to an outlet of the bottom, in the space below the bottom...".

Proper construction of the term "rotatably connected," viewed in light of the '948 Patent's specification and prosecution history, requires that the spout must be capable of being rotated relative to the bottom outlet *while remaining connected* to that outlet. This construction is mandated by both the patentee's statements during prosecution (prosecution history estoppel/disclaimer) and the explicit description within the specification (specification disclaimer/dedication by describing but not claiming an alternative).

A. Prosecution History Disclaimer

During the prosecution of the application leading to the '948 Patent (Appl. No. 13/324,796), the Examiner repeatedly rejected the claims (including parent claim 16, which matured into issued claim 1) based on prior art, particularly the combination of Bunce (US 591,377) and Moore (US 6,446,280). A key point of contention was whether Moore disclosed a "rotatably connected" drain tube that could render the applicant's invention obvious.

The Examiner argued that Moore's drain tube (40) being inserted into a fitting would allow for rotation. In response, the applicant (Simplehuman) traversed these rejections, arguing forcefully that Moore did *not* teach or suggest a rotatable connection. The applicant specifically pointed out that Moore suggested fixed connection methods like epoxy or soldering and that Moore's flexible tube did not necessitate a rotatable connection. For example, applicant argued: "Nowhere in Moore is there any reference to **rotatably connecting** the drain tube 40 to the basin 10" and that suggested sealing methods "render a fixed fitting, not a rotatable fitting". Applicant further distinguished the claim language: "Claim 16 specifically recites 'rotatably connected', which, when interpreted in light of the specification, means that the spout thus connected can be **rotated freely** with respect to the bottom of the dish rack". See prosecution history of '948 Patent at Pages 105-106.

By repeatedly arguing against the Examiner's interpretation of Moore and emphasizing the lack of a true rotatable connection in the prior art to distinguish its invention, the patentee disclaimed connection mechanisms that are merely repositionable after detachment, or fixed once connected (cannot rotate freely). The scope of "rotatably connected" was narrowed during prosecution to require the ability to rotate freely *while connected*, consistent with the applicant's arguments distinguishing Moore.

B. Specification Disclaimer/Dedication

The specification of the '948 Patent explicitly describes, but does not claim, an alternative mechanism for changing the spout's orientation that mirrors the Plaintiffs' product's functionality. At Col. 3, ll. 38-41, the specification states: "**As an alternative**, the drain channel 64 can be removed from the drip tray 14 and the spout 66 rotated in any manner desired before re-attaching the drain channel 64 to the drip tray 14."

This passage describes a method where the spout is *not* rotated while connected but is instead *removed*, reoriented, and *re-attached*. By explicitly presenting this as an "alternative" to the claimed embodiment

(where the spout *is* rotatably connected), the patentee dedicated this remove-and-reattach mechanism to the public. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) ("[T]he specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor."); *Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co.*, 285 F.3d 1046 (Fed. Cir. 2002) ("when a patent drafter discloses but declines to claim subject matter, this action dedicates that unclaimed subject matter to the public, and application of the doctrine of equivalents to recapture subject matter deliberately left unclaimed would conflict with the primacy of the claims in defining the scope of the patentee's exclusive right."). The Plaintiffs' product embodies this disclaimed/dedicated alternative, not the claimed "rotatably connected" feature.

IV. THE PLAINTIFFS' DISH DRYING RACK DOES NOT INFRINGE INDEPENDENT CLAIM 1

Applying the proper claim construction of "rotatably connected," the Plaintiffs' Dish Drying Rack does not meet this limitation of claim 1.

- **No Literal Infringement:** The spout of the Plaintiffs' product is *not* "rotatably connected" to the bottom outlet. It is fixedly connected via a snap-fit mechanism in each operational position. Rotation is only possible *after* the spout is physically disconnected and removed from the outlet. This fixed, remove-and-reattach mechanism is precisely what the patentee disclaimed during prosecution and dedicated to the public in the specification. Therefore, the Plaintiffs' spout is not "rotatably connected" as required by claim 1.
- **No Infringement Under the Doctrine of Equivalents:** Prosecution history estoppel bars the patentee from recapturing, through the doctrine of equivalents, subject matter surrendered during prosecution to secure the patent. The patentee surrendered connection mechanisms that do not allow rotation *while connected* by arguing against the Examiner's reliance on Moore. Furthermore, the specification explicitly described and dedicated the remove-and-reattach alternative. Applying the doctrine of equivalents to cover the Plaintiffs' product's mechanism would impermissibly recapture this surrendered and dedicated subject matter. The difference between the claimed "rotatably connected" spout and the Plaintiffs' product's fixed, snap-fit, remove-and-reattach spout is substantial, particularly in light of the prosecution history and specification.

V. CONCLUSION

	<p>At least for the reasons set forth above, the Plaintiffs' Dish Drying Rack does not infringe independent claim 1 of the '948 Patent. The claim requires a spout that is "rotatably connected" to the bottom outlet, meaning it can rotate while remaining connected. The Plaintiffs' spout is fixedly attached via a snap-fit in each position and must be removed and reattached to change orientation. This mechanism falls squarely within the scope of subject matter disclaimed during prosecution and dedicated to the public in the specification.</p>
<p>Claims 2-14:</p> <p>2. The dish rack as in claim 1, wherein the first pair of legs and the second pair of legs share a common leg.</p> <p>3. The dish rack as in claim 1, wherein the body comprises a wire frame.</p> <p>4. The dish rack as in claim 3, wherein the body comprises a drip tray having a base, and the bottom is defined by the base of the drip tray.</p> <p>5. The dish rack as in claim 4, wherein the drip tray is removably supported by the wireframe.</p> <p>6. The dish rack as in claim 5, wherein the drip tray comprises a longitudinal drain channel that is removably coupled to and supported from the base of the drip tray, and the spout is rotatably coupled to the bottom of the drain channel.</p> <p>7. The dish rack as in claim 5, wherein the structure for supporting dishes is provided on the drip tray.</p> <p>8. The dish rack as in claim 1, wherein the structure for supporting dishes is made of a plastic material.</p> <p>9. The dish rack as in claim 1, wherein the spout is pivotally attached to the bottom of the body.</p> <p>10. The dish rack as in claim 9, wherein the spout is pivotally attached to the bottom of the body for rotation of the spout about a pivot axis, and wherein the spout is positionable between the first and second positions by rotating the spout about the pivot axis.</p> <p>11. The dish rack as in claim 10, wherein an opening is provided along the pivot axis to allow water to drain from the bottom of the body to the spout.</p> <p>12. The dish rack as in claim 11, wherein the spout comprises an open channel structure.</p> <p>13. The dish rack as in claim 1, wherein the spout has an open concave longitudinal channel structure.</p> <p>14. The dish rack as in claim 6, wherein the spout has an open concave longitudinal channel structure.</p>	<p>Additionally, at least because the Plaintiffs' Dish Drying Rack does not infringe independent claim 1, the Plaintiffs' Dish Drying Rack continues to not infringe claims 2-14, which are dependent on independent claim 1.</p>

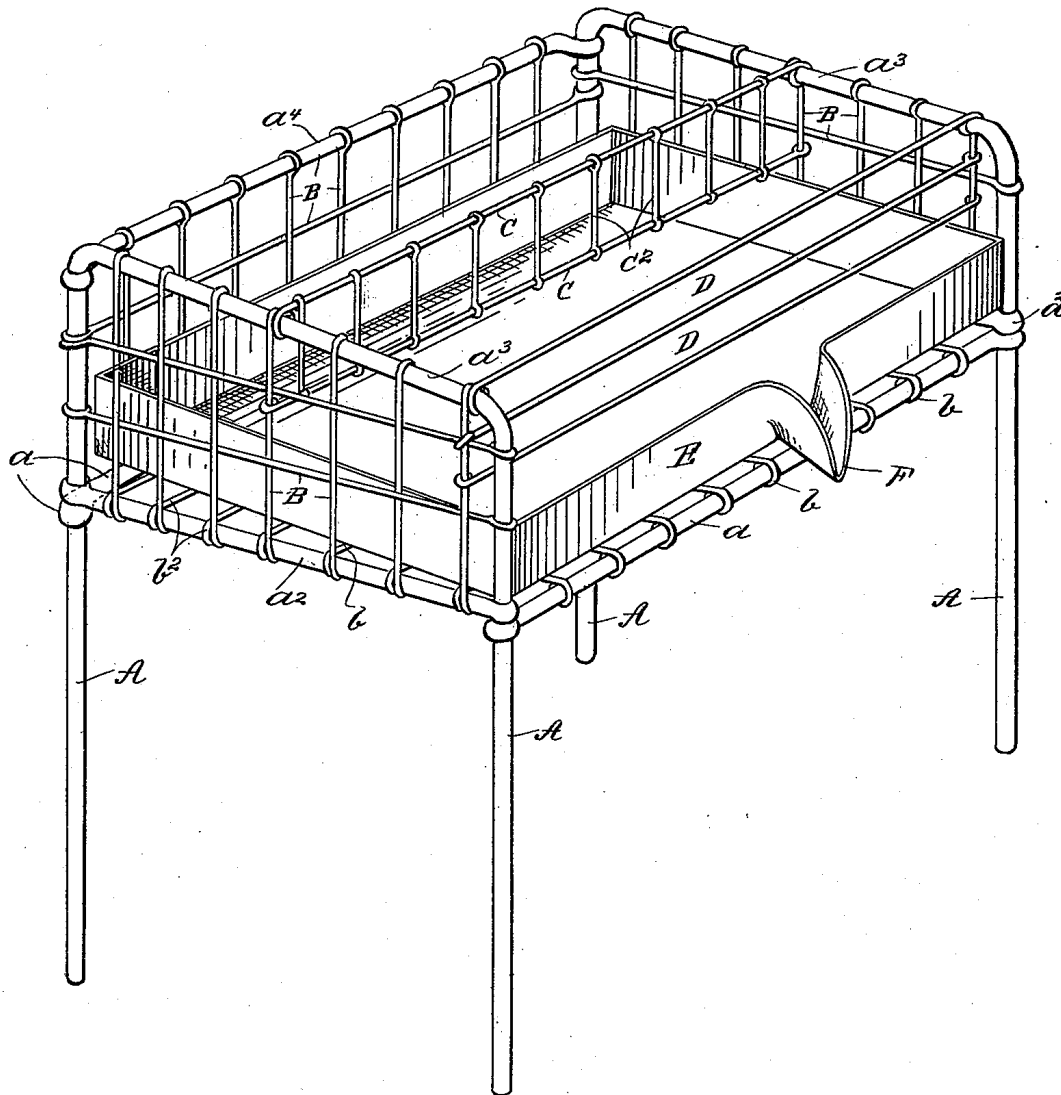
EXHIBIT F

(No Model.)

R. BUNCE.
DISH DRAINER.

No. 591,377.

Patented Oct. 12, 1897.



WITNESSES:

C. Fordson
C. Gersh

INVENTOR

Richard Bunce
BY
Edgar Tate & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

RICHARD BUNCE, OF BROOKLYN, NEW YORK.

DISH-DRAINER.

SPECIFICATION forming part of Letters Patent No. 591,377, dated October 12, 1897.

Application filed April 12, 1897. Serial No. 631,704. (No model.)

To all whom it may concern:

Be it known that I, RICHARD BUNCE, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Dish-Drainers, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

10 This invention relates to dish-drainers for use in kitchens, restaurants, hotels, and similar places; and the object thereof is to provide an improved device of this class which is adapted to serve as a drainer for dishes of various kinds and classes and for other and analogous uses in kitchens and similar places.

15 The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by letters of reference, said drawing being a perspective view of my improved dish-drainer.

20 In the practice of my invention I provide a frame which is preferably composed of metal rods or heavy wire and which is oblong in form and provided with legs A, and the bottom portion of said frame consists of horizontal side rods *a* and end rods *a*², which are connected with the legs A in any desired manner, said side rods *a* and the end rods *a*² being preferably provided with eyes or rings, through which the legs A are passed, and the said legs A are carried upwardly at each end and connected by a cross-rod *a*³, formed integrally therewith, and at the back of the frame the upper portion thereof is also provided with a horizontal rod *a*⁴.

25 The body portion of the back and ends of this frame is composed of vertical and horizontal wires B, as clearly shown in the drawing, and the bottom thereof of horizontal and transverse rods *b*, and arranged longitudinally of the top of the frame is a brace consisting of two horizontal rods C, one of which is placed over the other, and said horizontal

rods are connected by short vertical rods C², and the front upper portion of the frame is provided with three horizontal brace-rods D.

30 The rods B, C, C², *b*, and D, which constitute the body portion of the frame, are much smaller than the rods or bars which constitute the main part of said frame, and placed in the frame thus formed is a tray E, which is rectangular in form and which is provided centrally of the front thereof with a discharge-spout F.

35 The tray E when placed in the frame is slightly higher at the rear side than at the front thereof, and said tray may be made of any desired material, galvanized sheet metal or similarly-prepared material being preferred, and in practice the dishes or other articles to be drained are put in the tray and hot or boiling water poured thereon, and the water runs out through the spout F into a suitable receptacle prepared therefor.

40 It will be understood that this device may be made of any desired size, and the shape of the frame and the tray E may be varied without departing from the spirit of my invention or sacrificing its advantages.

45 Having fully described my invention, I claim as new and desire to secure by Letters Patent—

50 As an improved article of manufacture, a dish-drainer, comprising a frame supported by legs A, and which consists of side rods *a*, and end rods *a*², cross-rod *a*³, wires B, transverse rods *b*; a brace consisting of horizontal rods C, short rods C², brace-rods D', a tray E, having a discharge-spout F, substantially as and for the purpose set forth.

55 In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 10th day of April, 1897.

RICHARD BUNCE.

Witnesses:

C. GERST,
L. R. MAHONY.

EXHIBIT G



US 20040238464A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2004/0238464 A1**
Cheung (43) **Pub. Date: Dec. 2, 2004**

(54) **DISH RACK DRAINING TRAY PROVIDING
STABILITY AND EFFECTIVE DRAINING**

Publication Classification

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(US)

(51) **Int. Cl.⁷** **A47F 3/14**

(52) **U.S. Cl.** **211/41.3; 211/133.6**

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(57) **ABSTRACT**

A dish rack draining tray that includes a sloped trough having an exit end at the front side of the draining tray. The slope in the trough allows fluid to flow and discharge off the exit end of the trough on the front side of the draining tray. The draining tray includes one or more sloped surfaces that allow the fluid collected on the sloped surfaces to run off into the sloped trough. These sloped surfaces also support a dish rack on a horizontal plane.

(21) Appl. No.: **10/452,327**

(22) Filed: **Jun. 2, 2003**

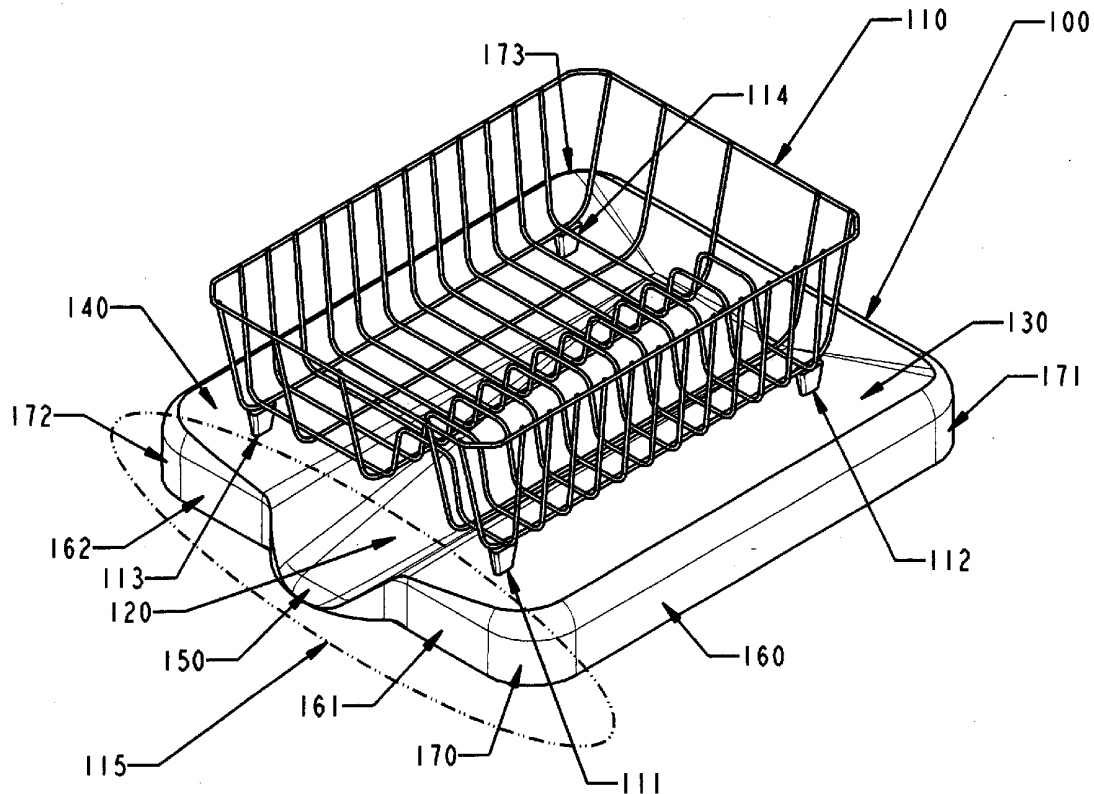


FIGURE 2
(TOP)

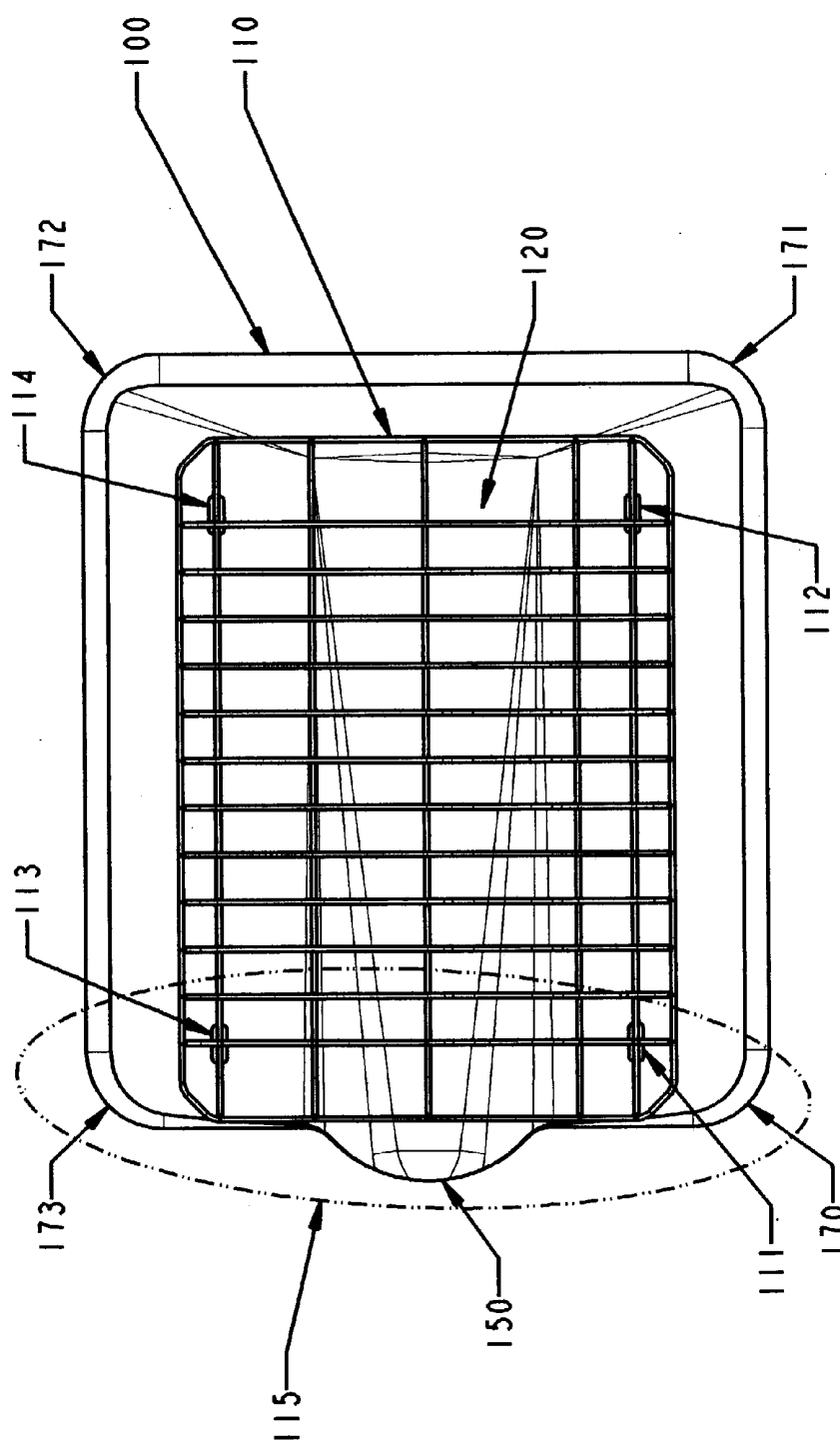


FIGURE 3
(SIDE)

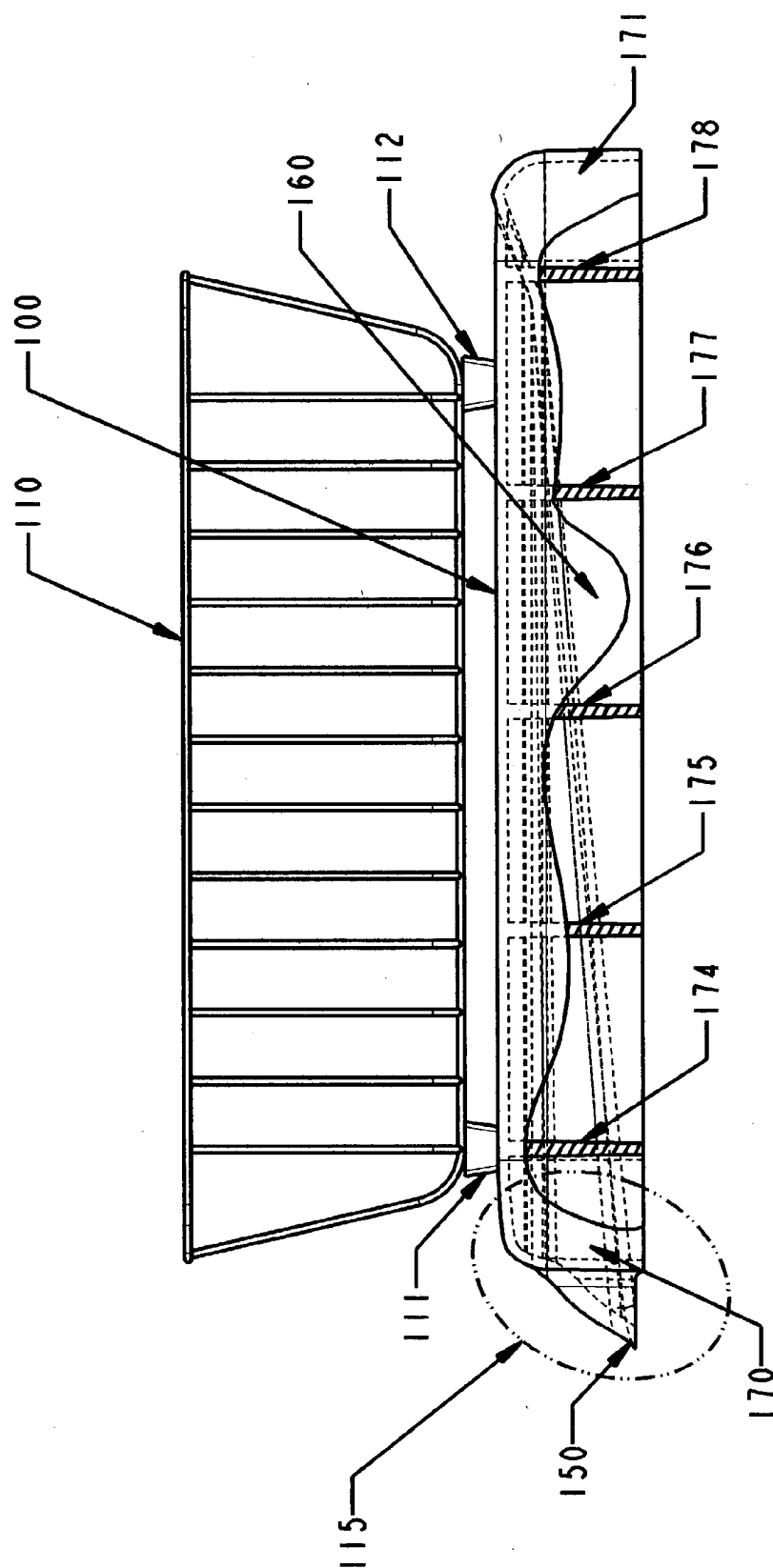


FIGURE 4
(FRONT)

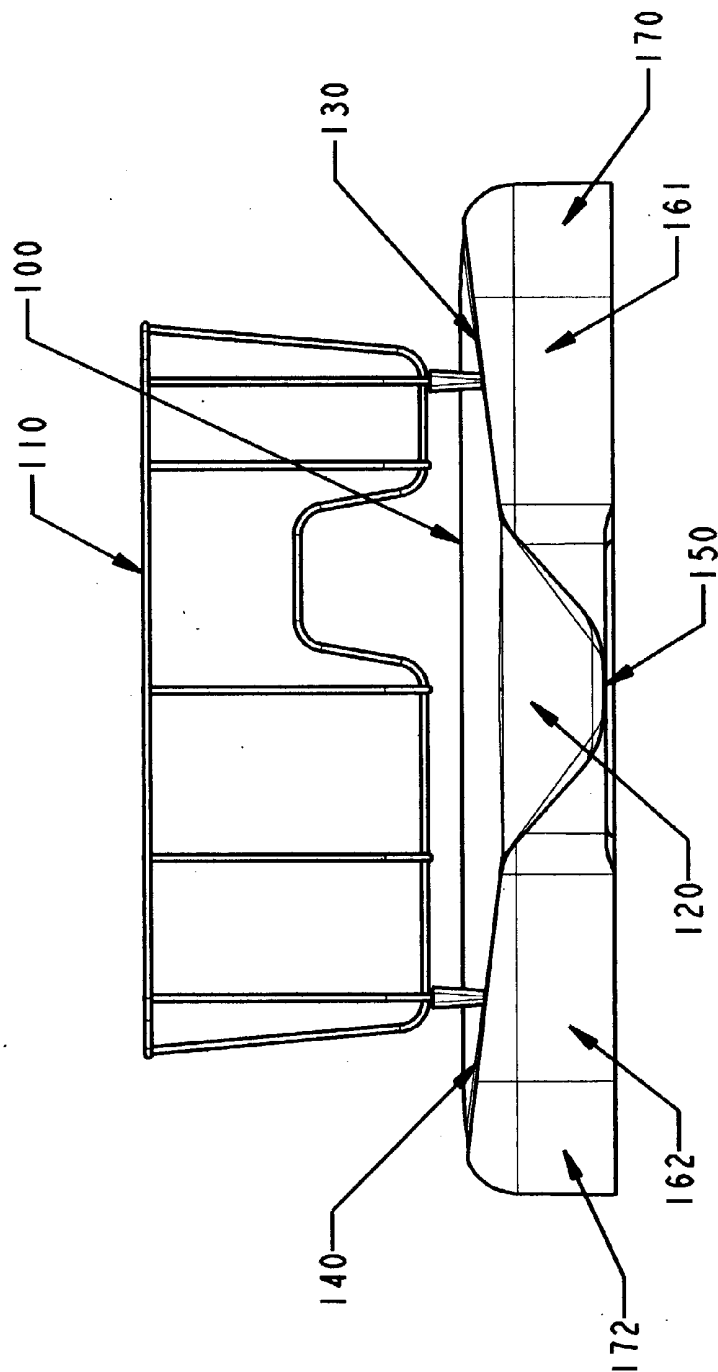


FIGURE 5

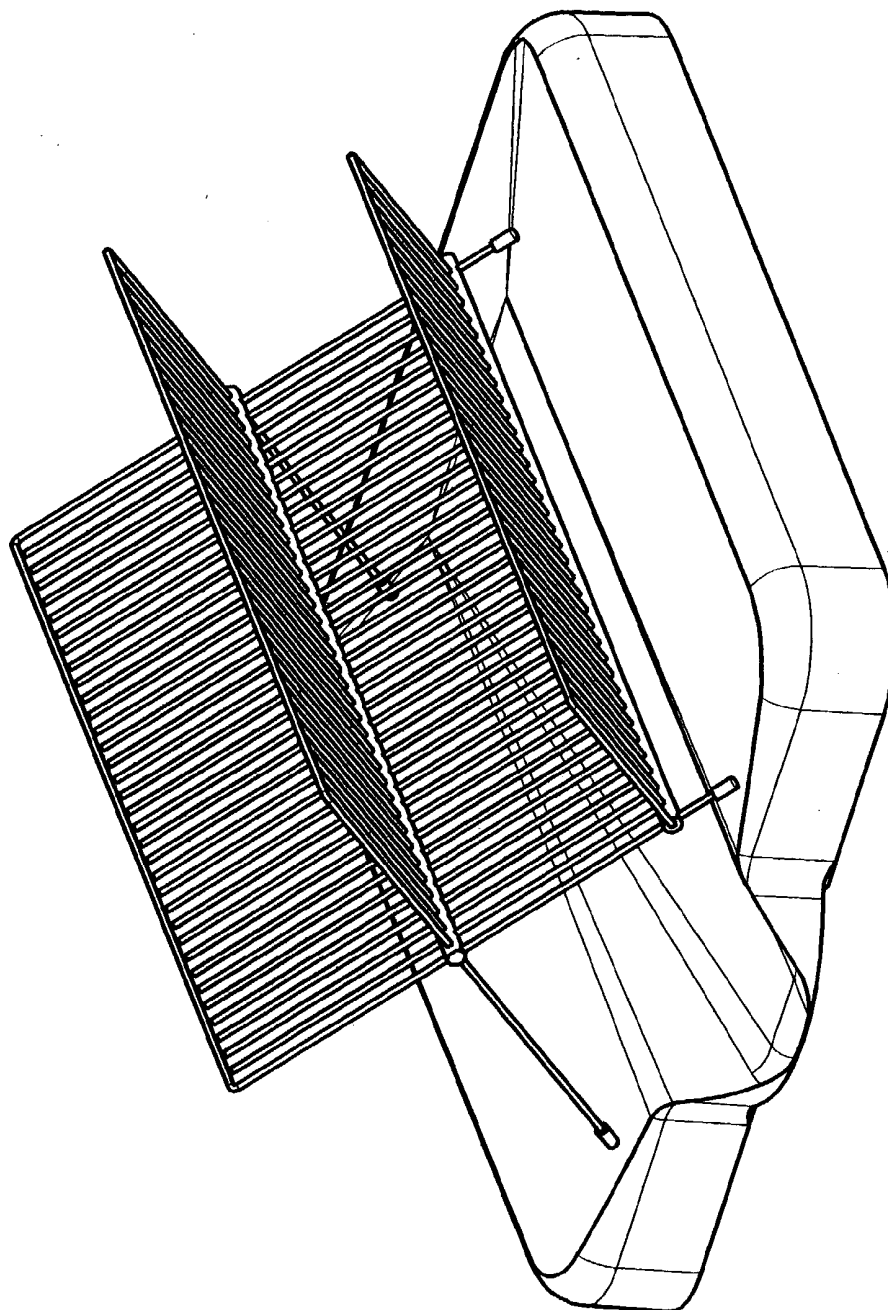
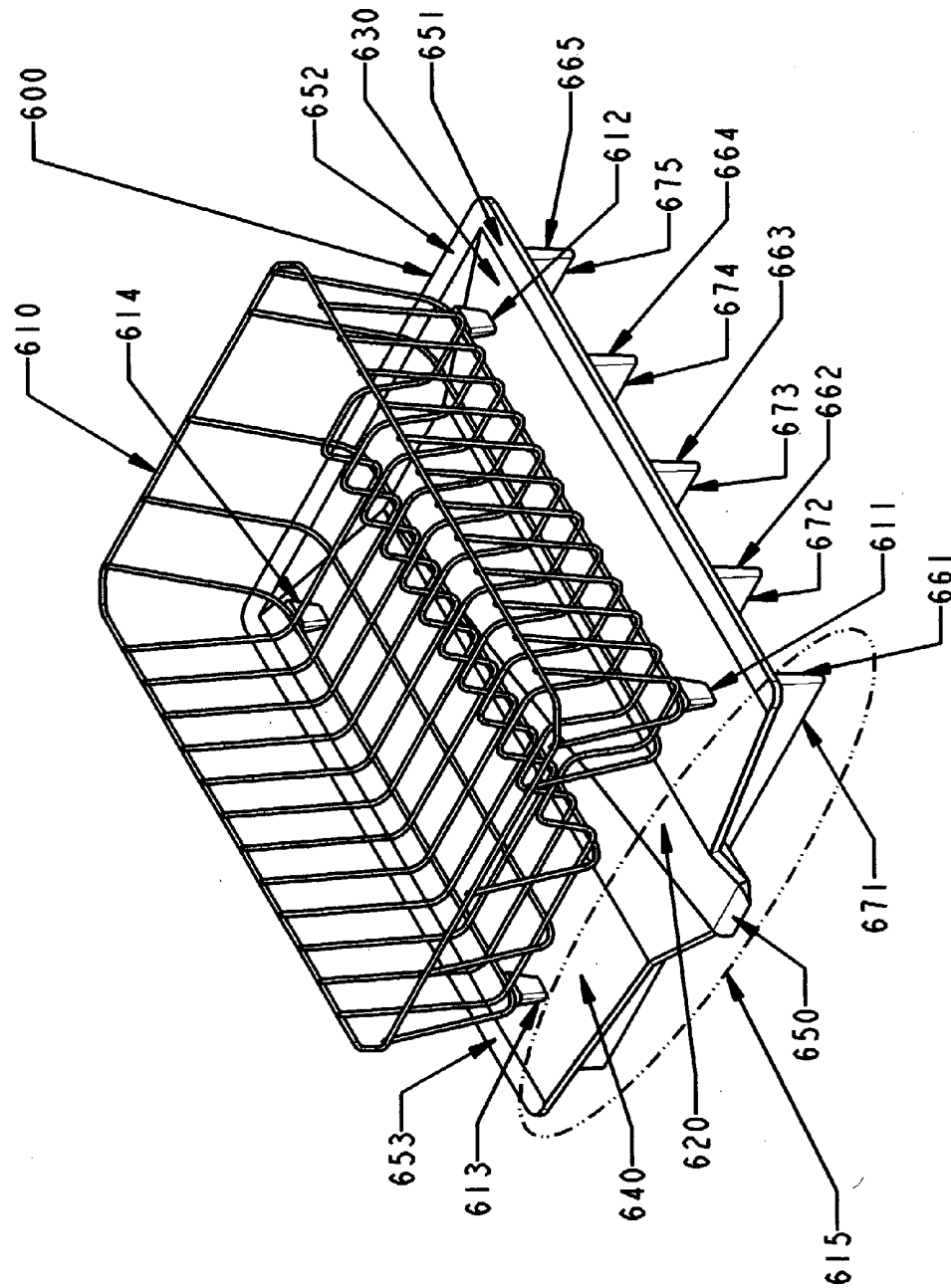


FIGURE 6



**FIGURE 7
(TOP)**

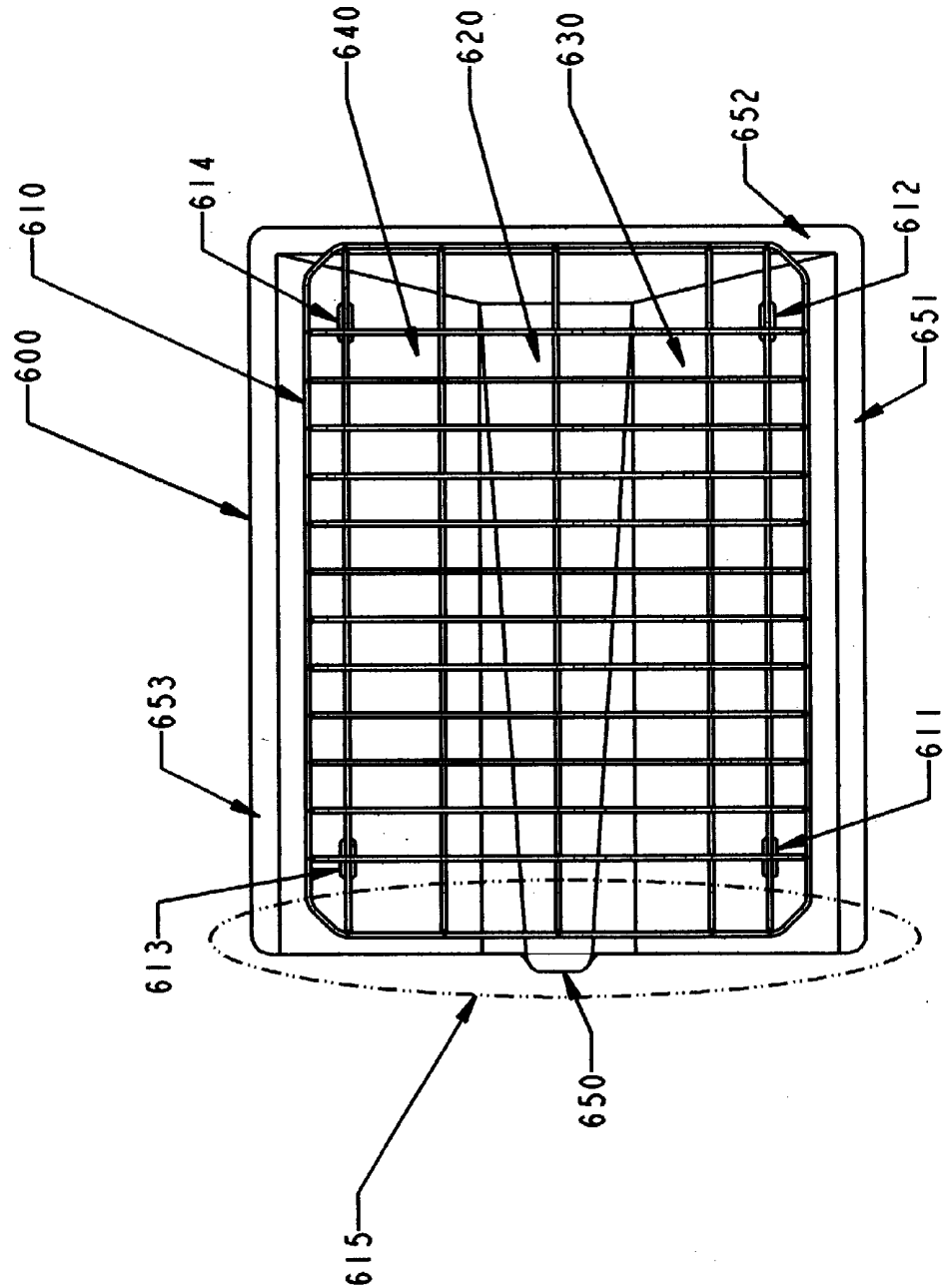


FIGURE 8
(SIDE)

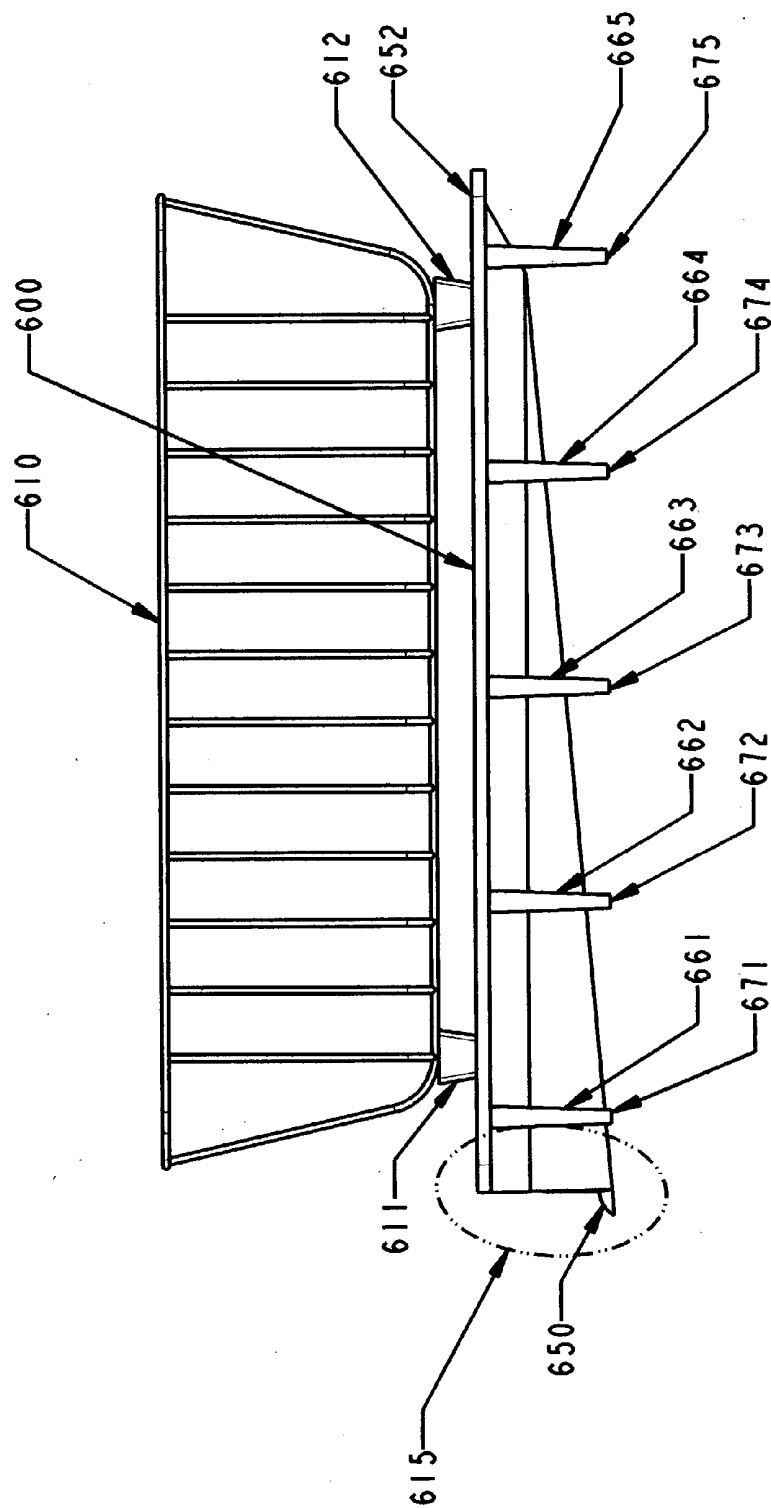
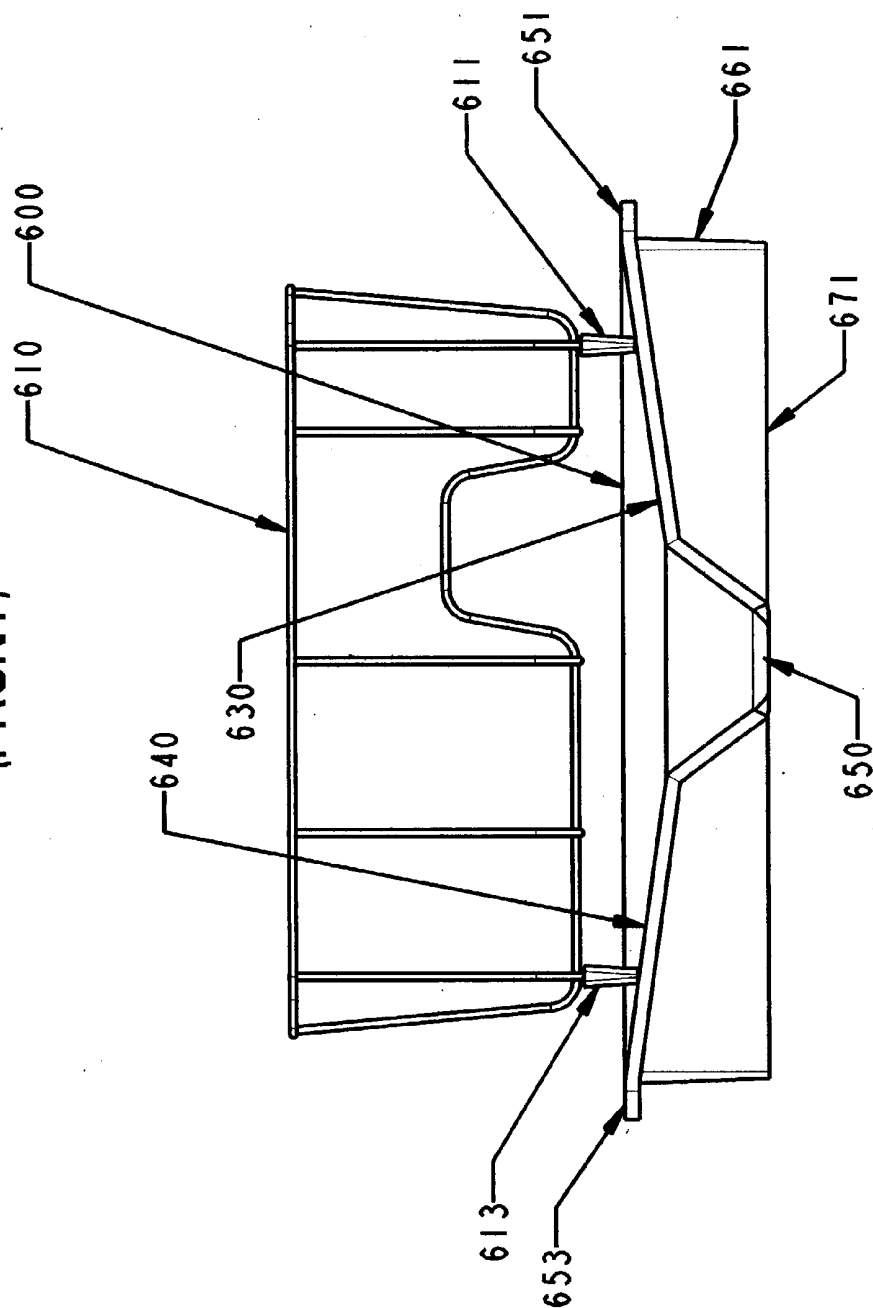


FIGURE 9
(FRONT)



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DISH RACK DRAINING TRAY PROVIDING STABILITY AND EFFECTIVE DRAINING

TECHNICAL FIELD

[0001] This application relates to a dish rack draining tray for a dish rack that is used for drying dishes on a kitchen counter top.

BACKGROUND

[0002] Dish racks and draining trays are commonly used in kitchens for drying dishes, utensils, and cookware after they are washed. A dish rack typically includes a wire or plastic frame and several foot members. A draining tray (or pan) is placed under the dish rack to collect water dripping off of the wet dishes, utensils, or cookware in the dish rack. The dish rack and the draining tray are often placed on a kitchen counter top next to a kitchen sink such that the water collected in the draining tray can discharge into the sink.

[0003] Most draining trays or draining mats on the market collect the water from the dish rack on a basically horizontal surface, which does not allow the collected water to effectively flow into the kitchen sink. Instead, the dish water remains in the draining tray for a period of time, which promotes the growth of mold and mildew in the tray.

[0004] Design Pat. D288,375, D288,374, and D273,904 attempt to address the problem of dish-water accumulation under a dish rack by providing a significantly angled surface to divert water away from the dish rack and into the kitchen sink. However, this same angled surface must also support the dish rack. As a result, the dish rack tends to be unstable on this angled surface, especially when the dish rack is loaded with large or heavy dishes.

[0005] Design U.S. Pat. D446,370 and utility U.S. Pat. No. 4,531,641 offer improved solutions over the aforementioned design patents by providing an angled draining surface to divert dish water into the kitchen sink and supporting the dish rack on a horizontal plane in order to improve stability. Design U.S. Pat. D446,370, however, includes many internal corners and edges, which can collect debris and make it hard to clean. This design also only provides two vertical ribs to support a dish rack, which cannot support folding dish rack designs. Utility U.S. Pat. No. 4,531,641 describes a dish rack and a drain board that are custom designed to fit only with each other. Their design involves multiple parts, including various folding legs, hinges, and/or straps, which makes them difficult to clean. Furthermore, the complex construction of the dish rack and drain board increases manufacturing costs.

[0006] Therefore, there is a long-felt need for a dish rack draining tray that can effectively drain water to a kitchen sink and can stably support a dish rack. The same draining tray should also be easy to clean and easy to manufacture.

SUMMARY

[0007] Implementations of the system may include one or more of the following. The invention system generally includes a draining tray with a front side, comprising

[0008] a) a sloped trough to allow a fluid to flow along the trough and to discharge off the front side of the draining tray at an exit end of the trough; and

[0009] b) one or more sloped surfaces wherein the slopes allow the fluid on the sloped surfaces to run off into the trough.

[0010] In one aspect, the present invention relates to a draining tray having a front side, comprising

[0011] a) a sloped trough distributed along a central axis of the draining tray; the trough being so sloped to allow a fluid to flow along the trough toward an exit end of the trough at the front side of the draining tray;

[0012] b) a lip at the exit end of the trough to allow fluid to be discharged off the front side of the draining tray at the exit end of the trough; and

[0013] c) two sloped surfaces parallel to the central axis and on the two sides of the sloped trough, wherein the two sloped surfaces are so sloped to allow the fluid on the sloped surfaces to run off into the sloped trough.

[0014] These two sloped surfaces are adapted to receive the foot members of a dish rack.

[0015] In another aspect, the present invention relates to a dish rack and draining system, comprising

[0016] a) a dish rack that supports one or more of dishes, utensils, and cookware, comprising one or more foot members, and

[0017] b) a draining tray, comprising

[0018] i) a front side;

[0019] ii) a sloped trough to allow a fluid to flow along the trough and to be discharged off the front side at the exit end of the trough; and

[0020] iii) one or more surfaces so sloped to allow the fluid on the sloped surfaces to run off into the trough, wherein the sloped surfaces are adapted to receive the foot members of the rack.

[0021] An advantage of the present invention is that it provides a draining tray that effectively diverts dish water collected from the dish rack into a kitchen sink. The invention dish rack draining tray is free of the problem of water accumulation observed in the prior art draining trays.

[0022] Another advantage of the present invention is that it provides a horizontal plane in the dish rack draining tray to support the dish rack so that the dish rack is stable even when it is loaded with heavy dishes. The draining tray in the present invention is compatible with known dish rack designs, including basket dish racks, folding dish racks, as well as dish racks of various sizes.

[0023] Yet another advantage of the present invention is that it is very easy to clean. The corners, edges or crevices in the invention design are easily accessed and cleaned by the user.

[0024] Still another advantage of the present invention is that the design is very simple. The invention dish rack draining tray is based on a one-piece design, which eliminates the need for any assembly in manufacturing and promotes reliable performance for the user. The simple design also makes it inexpensive to manufacture the invention dish rack draining tray.

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[0025] The details of one or more embodiments are set forth in the accompanying drawings and in the description below. Other features, objects, and advantages of the invention will become apparent from the description and drawings, and from the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The accompanying drawings, which are incorporated in and form a part of this specification, illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention:

[0027] FIG. 1 is the perspective view of the dish rack draining tray supporting a basket-design dish rack in accordance with one embodiment of the present invention.

[0028] FIG. 2 is the top view of the dish rack draining tray and the dish rack of FIG. 1.

[0029] FIG. 3 is the side view of the dish rack draining tray and the dish rack of FIG. 1.

[0030] FIG. 4 is the front view of the dish rack draining tray and the dish rack of FIG. 1.

[0031] FIG. 5 is the perspective view of the dish rack draining tray supporting a folding-design dish rack.

[0032] FIG. 6 is the perspective view of the dish rack draining tray supporting a basket-design dish rack in accordance with another embodiment of the present invention.

[0033] FIG. 7 is the top view of the dish rack draining tray and the dish rack of FIG. 6.

[0034] FIG. 8 is the side view of the dish rack draining tray and the dish rack of FIG. 6.

[0035] FIG. 9 is the front view of the dish rack draining tray and the dish rack of FIG. 6.

DETAILED DESCRIPTION OF THE INVENTION

[0036] Reference will now be made in detail to the preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings. While the invention will be described in conjunction with the preferred embodiments, it will be understood that they are not intended to limit the invention to these embodiments. On the contrary, the invention is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the invention as defined by the appended claims. Furthermore, in the following detailed description of the present invention, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be obvious to one of ordinary skill in the art that the present invention may be practiced without these specific details. In other instances, well known methods, procedures, components, and designs have not been described in detail so as not to unnecessarily obscure aspects of the present invention.

[0037] FIG. 1 is the perspective view of the dish rack draining tray 100 and a dish rack 110 in accordance to one embodiment of the present invention. FIGS. 2-4 are the top view, the side view and the front view of the dish rack draining tray 100 and a dish rack 110 in FIG. 1. The dish rack 110 illustrated in FIG. 1 is a wire-framed basket

including foot members 111-114 underneath the basket. Other dish rack designs are also compatible with the present invention. The draining tray in the present invention is compatible with other known dish rack designs, such as basket dish racks, folding dish racks, as well as dish racks of various sizes or of different materials. For example, the dish rack 110 can also be a folding dish rack as exemplified in the U.S. Pat. No. 4,221,299. The dish rack draining tray 100 includes a front side 115, supporting side walls 160, 161, 162 around the rim or peripheral edges of the dish draining tray 100, and four rounded corners 170-173. The dish rack draining tray 100 can be placed on a kitchen-counter top with a kitchen sink. The front side 115 of the dish rack draining tray 100 is adapted to face the rim of the kitchen sink.

[0038] The lower edges of the supporting walls 160-162 can define a base plane to allow the dish rack draining tray 100 to stand on a flat horizontal surface such as a kitchen countertop. The dish rack draining tray 100 can also include optional foot members spaced apart on the underside of the draining tray 100 to provide proper elevation. The height of the foot members can optionally be adjusted for height or tilt directions.

[0039] In accordance with the present invention, the draining tray 100 includes a sloped trough 120 that is sloped down toward the front side 115 of the dish rack draining tray 100. In one preferred design of the present invention, the trough 120 is substantially aligned along the central axis of the dish rack draining tray 100. The trough 120 can include multiple angular faces and a flat bottom surface, as shown in FIG. 1. The bottom of the trough 120 can also have other forms, such as a V-shape or U-shape. A lip 150 can be formed at the exit end of the trough 120 on the front side 115 of the dish rack draining tray 100. In one embodiment of the present invention, the lip 150 protrudes outward relative to the supporting side walls 161, 162 on the front side 115 so that it can reach into the kitchen sink. The height of the lip 150 is elevated so that it clears the height of the rim of the kitchen sink that is sometimes above the surface of the kitchen counter.

[0040] In accordance with the present invention, the draining tray 100 further includes one or more sloped surfaces 130, 140 that are inclined down toward the trough 120. As shown in FIG. 1, the sloped surfaces 130, 140 are located on the two sides of the trough 120 and are substantially symmetric along the central axis of the dish rack draining tray 100. The dish rack 110 is placed on the dish rack draining tray with the foot members 111-114 standing on the sloped surfaces 130, 140.

[0041] In a preferred embodiment of the present invention, the sloped surfaces 130, 140 are parallel to the central axis of the dish rack draining tray 100. Most common dish racks have four foot members that are distributed at the corners of a rectangle. The sloped surfaces 130, 140 in this configuration allow the foot members 111-114 of the most common dish racks 110 to be positioned on a horizontal plane. As a result, the dish rack 110 can remain stable in a level plane even when it is loaded with heavy dishes.

[0042] The operation of the dish rack draining tray 100 and the dish rack 110 are now described. The dish rack 110 is placed over the sloped surfaces 120, 130 of dish rack draining tray 100 as described above. The dish rack 110 and

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the dish rack draining tray **100** are placed next to a kitchen sink with the lip **150** over the kitchen sink. Wet dishes, utensils, and cookware are loaded on the dish rack **110** after they are washed over the kitchen sink. Water from the wet dishes, utensils, and cookware drips onto the sloped surfaces **130, 140** and the sloped trough **120** of the draining tray. The incline in the sloped surfaces **130, 140** allow water to run off into the trough **120**. The water collected in the trough **120** flows along the trough **120** to the exit end, and is then discharged off at the lip **150** into the kitchen sink (over the rim of the sink).

[0043] An advantage of the present invention is that the dish rack draining tray **100** provides well-defined sloped surfaces in any surface areas that may receive water dripping from the wet dishes, utensils and cookware on the dish rack **110**. The water collected by the dish rack draining tray **100** is effectively diverted along well-defined downward paths into a kitchen sink. Water does not accumulate in the dish rack draining tray **100**. Therefore the invention dish rack draining tray does not have the problems of water accumulating on its top surfaces or mold and mildew growing as a result of accumulated water, which is commonly seen in the prior art dish rack draining trays.

[0044] Another advantage of the present invention is that the dish rack draining tray **100** is very easy to clean. The surfaces of the dish rack draining tray **100** are smooth. The corners, edges or crevices in the invention design are easily accessible and cleaned by a user. In addition, the vertical ribs **174-178** connected to the underside of the draining tray provide extra strength in supporting the weight of the dishes, utensils, and cookware loaded on the dish rack **10**. The vertical ribs **174-178** prevent the sloped surfaces **130, 140** and the sloped trough **120** from sagging under the weight of the dishes. They ensure that the dish rack draining tray **100** will maintain its shape over an extended period of usage.

[0045] The dish rack draining tray **100** can be made of polymeric materials such as polypropylene, ABS, and high-strength types of plastic materials. The dish rack draining tray **100** can be fabricated using injection molding, vacuum molding, or pressure molding technologies. An advantage of the present invention is that the dish rack draining tray **100** is based on a very simple one-piece design. The design eliminates the need for any assembly steps in manufacturing, and provides reliable performance for the user. The simple design also makes it inexpensive to manufacture the dish rack draining tray **100**.

[0046] FIG. 5 is the perspective view of the dish rack draining tray as disclosed in the embodiment above in relation to FIG. 1, supporting a folding-design dish rack.

[0047] FIG. 6 is the perspective view of a dish rack draining tray **600** and a dish rack **610** in accordance to another embodiment of the present invention. FIGS. 7-9 are respectively the top view, the side view and the front view of the dish rack draining tray **600** and a dish rack **610** in FIG. 6. The top surfaces of the dish rack draining tray **600** are similar to those described in relation to FIG. 1. The dish rack draining tray **600** includes a sloped trough **620** having its exit end of the trough **620** on the front side **615** of the dish rack draining tray **600**. A lip **650** can be formed at the exit end of the trough **620**. The lip **650** can be protruded and elevated at such a height that the lip reaches over the rim of

the kitchen sink and into the kitchen sink. The dish rack draining tray can also optionally include edges **651-653** around its rim.

[0048] The dish rack draining tray **600** also includes sloped surfaces **630, 640** that are inclined toward the trough **620**. Preferably, the sloped surfaces **630, 640** are parallel to the central axis of the dish rack draining tray **600** such that the foot members **611-614** of the dish rack **610** can be positioned on a horizontal plane when they are placed on the sloped surfaces **630, 640**. The dish rack **610** can therefore remain stable even when it is loaded with heavy dishes.

[0049] Similar to the embodiment illustrated in FIG. 1, the dish water dripping from the wet dishes, utensils, and cookware is collected by the sloped surfaces **630, 640** and the sloped trough **620**. The collected water flows downward from the sloped surfaces **630, 640** into the sloped trough **620**, flows along the sloped trough **620** to the lip **650**, and finally discharges into the kitchen sink.

[0050] The dish rack draining tray **600** is supported by a plurality of vertical ribs **661-665** in connection with the underside of the dish rack draining tray **600**. The low edges **671-675** of the vertical ribs **661-665** can define a flat base plane that allows the dish rack draining tray **600** to stand on a flat surface such as a counter top in a kitchen.

[0051] The invention dish rack draining tray **600** shown in FIG. 6 possesses the same advantages as those of the embodiment of the present invention shown in FIG. 1 such as the elimination of water accumulation, the simplicity of a one-piece design, and easy cleaning. In addition, the vertical ribs **661-665** provide extra strength in supporting the weight of the dishes, utensils, and cookware loaded on the dish rack **610**. The vertical ribs **661-665** prevent the sloped surfaces **630, 640** and the slope trough **620** from sagging under the weight of the dishes. They ensure that the dish rack draining tray **600** will maintain its shape over an extended period of usage.

[0052] Although specific embodiments of the present invention have been illustrated in the accompanying drawings and described in the foregoing detailed description, it will be understood that the invention is not limited to the particular embodiments described herein, but is capable of numerous rearrangements, modifications, and substitutions without departing from the scope of the invention. The following claims are intended to encompass all such modifications.

What is claimed is:

1. A draining tray having a front side, comprising

- a) a sloped trough to allow a fluid to flow along the trough and to be discharged off the front side of the draining tray at an exit end of the trough; and
- b) one or more sloped surfaces wherein the slopes allow the fluid on the sloped surfaces to run off into the trough.

2. The draining tray of claim 1, wherein the exit end of the trough clears the height of the rim of a sink so that the fluid can be discharged from the exit end of the trough into the sink.

3. The draining tray of claim 1, further comprising a lip at the exit end of the trough to allow fluid to be discharged off the front side of the draining tray.

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4. The draining tray of claim 3 wherein the lip at exit end of the trough clears the height of the rim of a sink so that the fluid can be discharged from the exit end of the trough into the sink.

5. The draining tray of claim 1, further comprising one or more supporting walls along the peripheral edges of the draining tray.

6. The draining tray of claim 5, wherein the lower edges of the one or more supporting walls define a base plane to allow the draining tray to stand on a flat horizontal surface.

7. The draining tray of claim 1, further comprising one or more vertical ribs in connection with the under side of the draining tray, wherein the low edges of the vertical ribs define a base plane to allow the draining tray to stand on a flat horizontal surface.

8. The draining tray of claim 1, further comprising one or more foot members in connection with the underside of the draining tray.

9. The draining tray of claim 1, wherein the trough is distributed along the central axis of the draining tray and the two sloped surfaces are located on each side of the trough.

10. The draining tray of claim 1, wherein the draining tray comprises polymeric materials.

11. The draining tray of claim 1 wherein the process of making the draining tray includes injection molding, vacuum molding, or pressure molding.

12. The draining tray of claim 1, wherein the draining tray comprises four sides and four corners, including the front side adapted to be placed by a kitchen sink.

13. A draining tray having a front side, comprising

- a) a sloped trough distributed along a central axis of the draining tray; the trough being so sloped to allow a fluid to flow along the trough toward an exit end of the trough at the front side of the draining tray;
- b) a lip at the exit end of the trough to allow fluid to be discharged off the front side of the draining tray at the exit end of the trough; and
- c) two sloped surfaces parallel to the central axis and on the two sides of the sloped trough, wherein the two sloped surfaces are so sloped to allow the fluid on the sloped surfaces to run off into the sloped trough.

14. The draining tray of claim 13 wherein the lip at the exit end of the trough clears the height of the rim of a sink so that the fluid can discharge from the exit end of the trough into the sink.

15. The draining tray of claim 13, further comprising one or more supporting walls along the peripheral edges of the draining tray, wherein the lower edges of the one or more supporting walls define a base plane to allow the draining tray to stand on a flat surface.

16. The draining tray of claim 13, further comprising one or more vertical ribs in connection with the underside of the draining tray, wherein the low edges of the vertical ribs define a base plane to allow the draining tray to stand on a horizontal flat surface.

17. The draining tray of claim 13, wherein the process of making the draining tray includes injection molding, vacuum molding, or pressure molding.

18. A dish rack and draining system, comprising

- a) a dish rack that supports one or more of dishes, utensils, and cookware, supported by one or more foot members; and
- b) a draining tray, comprising
 - i) a front side;
 - ii) a sloped trough to allow a fluid to flow along the trough and to be discharged off the front side at the exit end of the trough; and
 - iii) one or more surfaces so sloped to allow the fluid on the sloped surfaces to run off into the trough, wherein the sloped surfaces are adapted to receive the foot members of the dish rack.

19. The dish rack and draining system of claim 18, wherein the foot members of the dish rack received by the sloped surfaces are distributed on a horizontal plane.

20. The dish rack and draining system of claim 18, wherein the fluid carried on the dishes, utensils, and cookware in the dish rack drips onto the sloped surfaces and the sloped trough of the draining tray when the foot members of the dish rack are placed on the sloped surfaces.

* * * * *

EXHIBIT H



US006491170B1

(12) **United States Patent**
Madela

(10) **Patent No.:** **US 6,491,170 B1**
(45) **Date of Patent:** **Dec. 10, 2002**

(54) **DRYING AND ORGANIZING RACK FOR KITCHEN UTENSILS, FLATWARE AND CHINA**

6,119,736 A * 9/2000 Huang et al. 141/86

* cited by examiner

(76) **Inventor:** **Florendo Madela**, 44520 Fenhold St., Lancaster, CA (US) 93535

Primary Examiner—Robert W. Gibson, Jr.

Assistant Examiner—Erica B. Harris

(74) *Attorney, Agent, or Firm*—Goldstein & Lavas, P.C.

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

A drying and organizing rack for kitchen utensils, flatware and china includes a support member comprised of a square lower platform having four leg members coupled therewith. The four leg members have lower ends positionable on a recipient surface and upper ends disposed above the lower platform. At least two square trays are secured to the four leg members of the support member in a spaced relationship. The upper tray is defined by an open upper end, a lower end, and a peripheral side wall. The lower end has a drainage aperture therethrough. The open upper end has a plurality of compartments formed therein. The plurality of compartments dimensioned for receiving utensils, flatware, and china therein. The peripheral side wall has a plurality of cup hooks secured thereto.

(21) **Appl. No.:** **09/872,028**

(22) **Filed:** **Jun. 1, 2001**

(51) **Int. Cl.⁷** **A47G 19/00**

(52) **U.S. Cl.** **211/41.3**

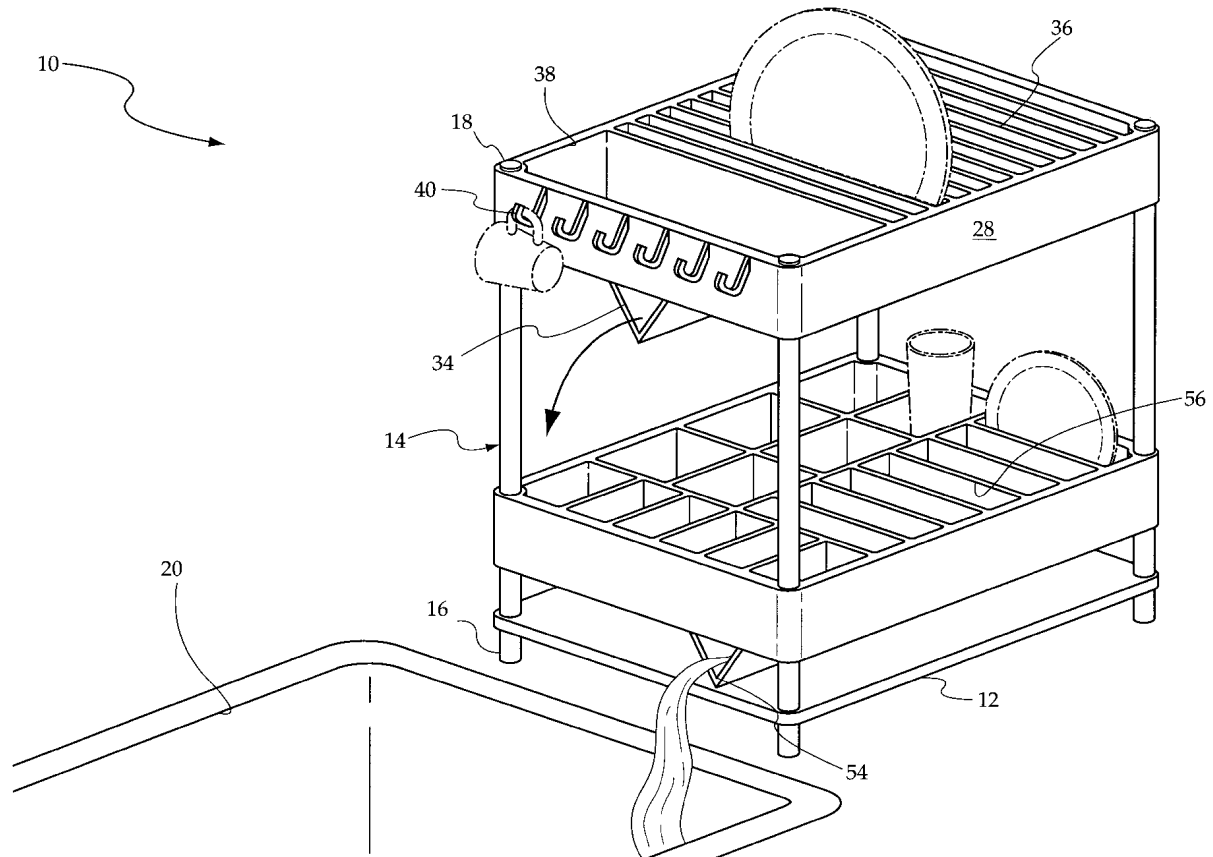
(58) **Field of Search** 211/41.3, 126.1, 211/128.1; D32/55, 56, 58, 59

(56) **References Cited**

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5,158,184 A * 10/1992 Craft et al. 211/41.3
D368,412 S * 4/1996 Lin D7/637

4 Claims, 2 Drawing Sheets

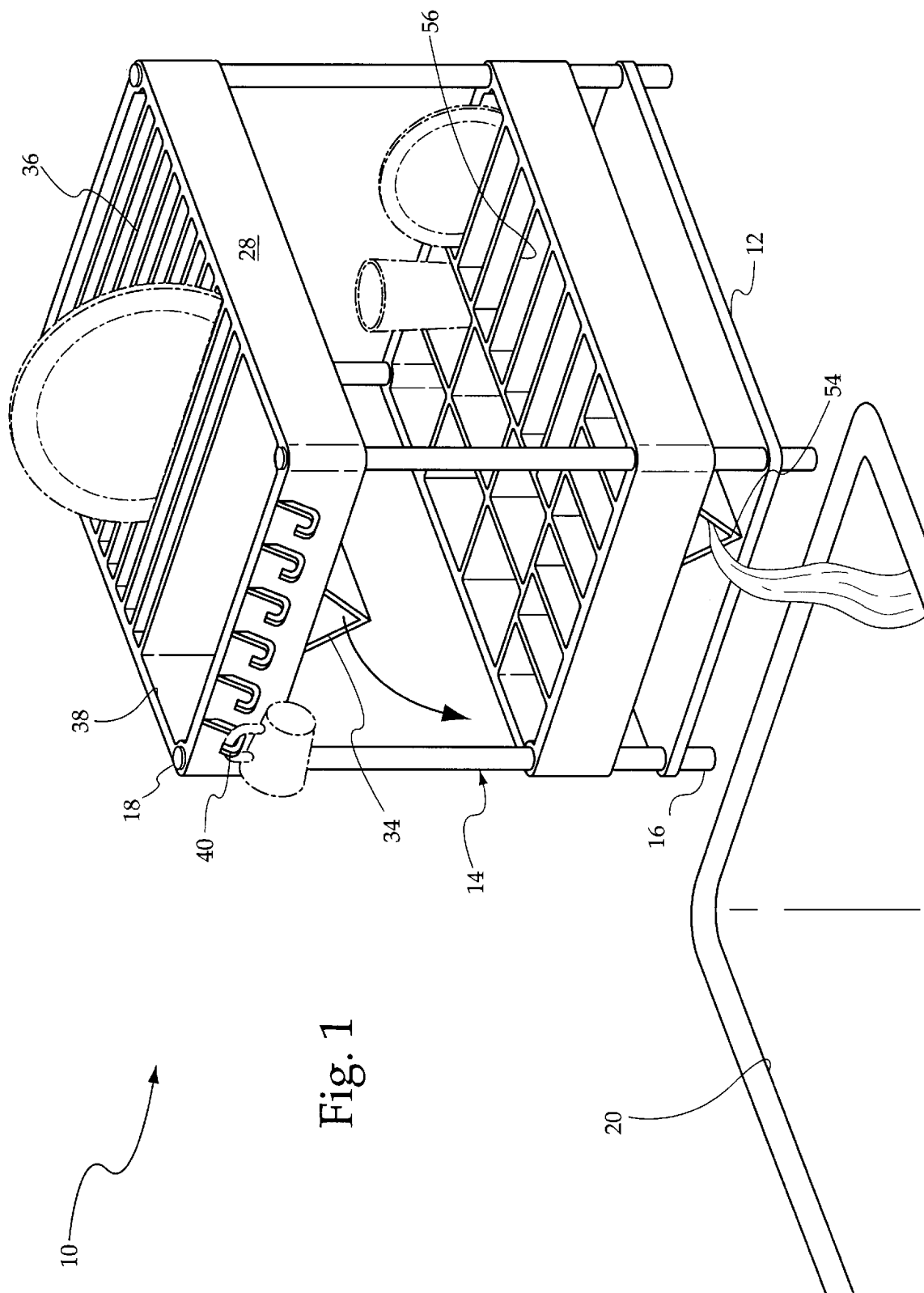


U.S. Patent

Dec. 10, 2002

Sheet 1 of 2

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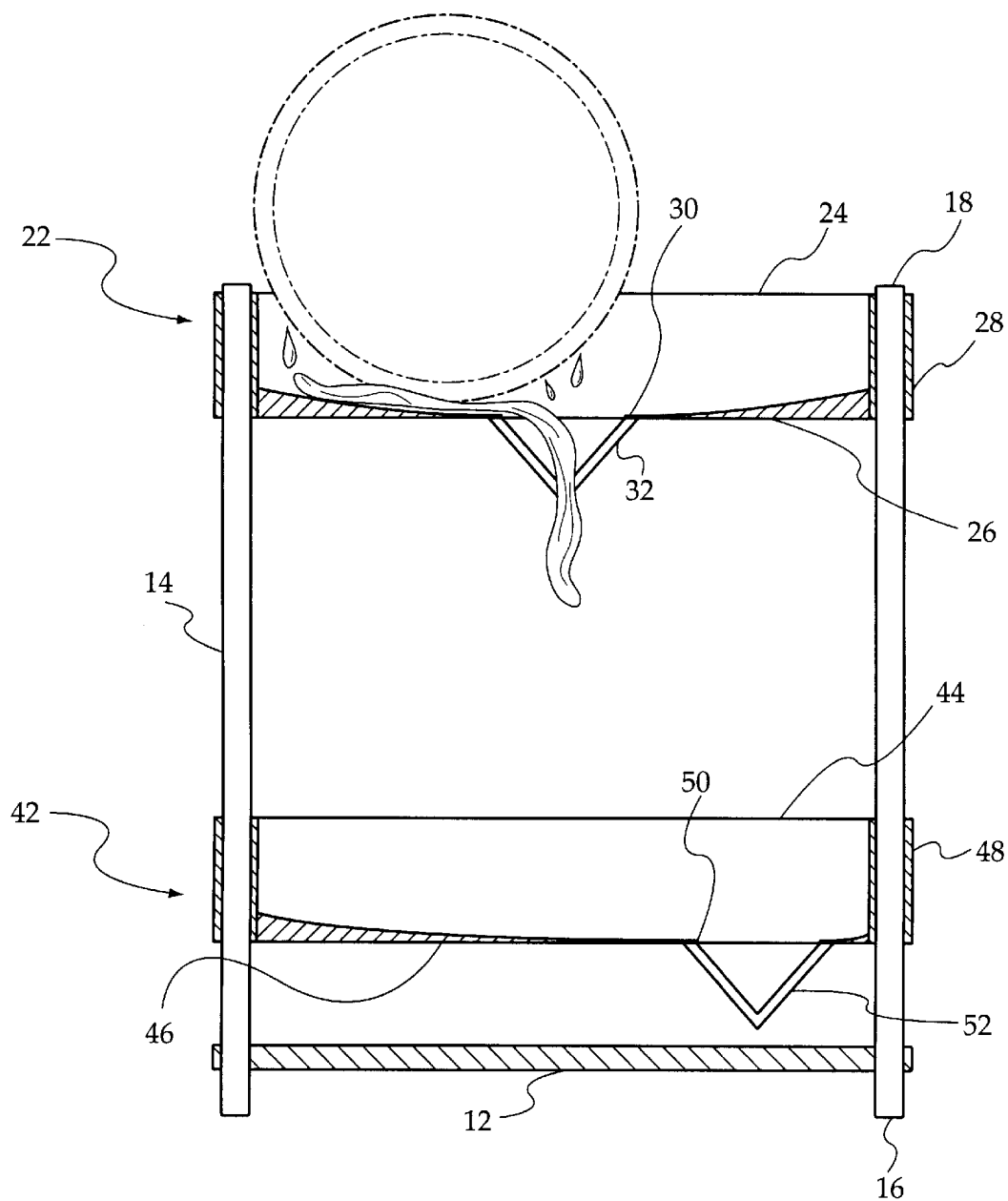


Fig. 2

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**DRYING AND ORGANIZING RACK FOR
KITCHEN UTENSILS, FLATWARE AND
CHINA**

BACKGROUND OF THE INVENTION

The present invention relates to a drying and organizing rack for kitchen utensils, flatware and china and more particularly pertains to holding utensils, flatware, and china in an organized manner while drying.

The use of kitchen utensil holding devices is known in the prior art. More specifically, kitchen utensil holding devices heretofore devised and utilized for the purpose of holding kitchen utensils are known to consist basically of familiar, expected and obvious structural configurations, notwithstanding the myriad of designs encompassed by the crowded prior art that have been developed for the fulfillment of countless objectives and requirements.

By way of example, U.S. Pat. No. 5,392,923 to Hassard discloses a multiple article organizer device with a plurality of levels. U.S. Pat. Nos. 4,632,347 to Jurgich and U.S. Pat. Nos. 4,870,754 to Chiou disclose various kitchen utensil holders. U.S. Pat. No. Des. 334,317 to So discloses the ornamental design for a kitchen utensil holder.

While these devices fulfill their respective, particular objectives and requirements, the aforementioned patents do not describe a drying and organizing rack for holding kitchen utensils, flatware, and china in an organized manner while drying.

In this respect, the drying and organizing rack for kitchen utensils, flatware and china according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in doing so provides an apparatus primarily developed for the purpose of holding utensils, flatware, and china in an organized manner while drying.

Therefore, it can be appreciated that there exists a continuing need for a new and improved drying and organizing rack for kitchen utensils, flatware and china that can be used for holding utensils, flatware, and china in an organized manner while drying. In this regard, the present invention substantially fulfills this need.

SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of kitchen utensil holding devices now present in the prior art, the present invention provides an improved drying and organizing rack for kitchen utensils, flatware and china. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved drying and organizing rack for kitchen utensils, flatware and china that has all the advantages of the prior art and none of the disadvantages.

To attain this, the present invention essentially comprises a support member consisting of a square lower platform having four leg members coupled therewith. The four leg members have lower ends positionable on a recipient surface and upper ends disposed above the lower platform. A square upper tray is secured to the upper ends of the four leg members of the support member. The upper tray is defined by an open upper end, a lower end, and a peripheral side wall. The lower end is slanted toward a central portion thereof. The central portion has a drainage aperture therethrough. The drainage aperture is in communication with a water outlet tray secured to a lower surface of the lower end.

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The water outlet tray has an open outer end for positioning adjacent to a sink. The open upper end has a plurality of compartments formed therein. The plurality of compartments include plate compartments and a main utensil compartment. The peripheral side wall has a plurality of cup hooks secured thereto. A square lower tray is secured to the four leg members of the support member below the upper tray. The lower tray is defined by an open upper end, a lower end, and a peripheral side wall. The lower end is slanted toward intermediate portion thereof. The intermediate portion has a drainage aperture therethrough. The drainage aperture is in communication with a water outlet tray secured to a lower surface of the lower end. The water outlet tray has an open outer end for positioning adjacent to a sink. The open upper end has a plurality of compartments formed therein. The plurality of compartments include compartments for bowls, flatware, and drinking glasses.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

It is therefore an object of the present invention to provide a new and improved drying and organizing rack for kitchen utensils, flatware and china that has all the advantages of the prior art kitchen utensil holding devices and none of the disadvantages.

It is another object of the present invention to provide a new and improved drying and organizing rack for kitchen utensils, flatware and china that may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new and improved drying and organizing rack for kitchen utensils, flatware and china that is of durable and reliable construction.

An even further object of the present invention is to provide a new and improved drying and organizing rack for kitchen utensils, flatware and china that is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such a drying and organizing rack for kitchen utensils, flatware and china economically available to the buying public.

Even still another object of the present invention is to provide a new and improved drying and organizing rack for kitchen for holding kitchen utensils, flatware, and china in an organized manner while drying,

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Lastly, it is an object of the present invention to provide a new and improved drying and organizing rack for holding kitchen utensils, flatware and china including a support member consisting of a square lower platform having four leg members coupled therewith. The four leg members have lower ends positionable on a recipient surface and upper ends disposed above the lower platform. At least two square trays secured to the four leg members of the support member in a spaced relationship. The upper tray is defined by an open upper end, a lower end, and a peripheral side wall. The lower end has a drainage aperture therethrough. The open upper end has a plurality of compartments formed therein. The plurality of compartments dimensioned for receiving utensils, flatware, and china therein. The peripheral side wall has a plurality of cup hooks secured thereto.

These together with other objects of the invention, along with the various features of novelty that characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a perspective view of the preferred embodiment of the drying and organizing rack for kitchen utensils, flatware and china constructed in accordance with the principles of the present invention.

FIG. 2 is a side view of the present invention illustrated in cross-section.

The same reference numerals refer to the same parts through the various figures.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, the preferred embodiment of the new and improved drying and organizing rack for kitchen utensils, flatware and china embodying the principles and concepts of the present invention and generally designated by the reference number 10 will be described.

Specifically, it will be noted in the various figures that the device relates to a drying and organizing rack for holding kitchen utensils, flatware, and china in an organized manner while drying. In its broadest context, the device consists of a support member, a square upper tray, and a square lower tray. Such components are individually configured and correlated with respect to each other so as to attain the desired objective.

The support member consists of a square lower platform 12 having four leg members 14 coupled therewith. The four leg members 14 have lower ends 16 positionable on a recipient surface and upper ends 18 disposed above the lower platform 12. In use, the support member is positioned adjacent to a sink 20 in a manner similar to standard drying racks. Note FIG. 1.

The square upper tray 22 is secured to the upper ends 18 of the four leg members 14 of the support member. The

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upper tray 22 is defined by an open upper end 24, a lower end 26, and a peripheral side wall 28. The lower end 26 is slanted toward a central portion thereof. The central portion has a drainage aperture 30 therethrough. The drainage aperture 30 is in communication with a water outlet tray 32 secured to a lower surface of the lower end 26. The water outlet tray 32 has an open outer end 34 for positioning adjacent to a sink 20. The open upper end 24 has a plurality of compartments formed therein.

The plurality of compartments include plate compartments 36 and a main utensil compartment 38. The peripheral side wall 28 has a plurality of cup hooks 40 secured thereto.

The square lower tray 42 is secured to the four leg members 14 of the support member below the upper tray 22.

The lower tray 42 is defined by an open upper end 44, a lower end 46, and a peripheral side wall 48. The lower end 46 is slanted toward a an intermediate portion thereof. The intermediate portion has a drainage aperture 50 therethrough. The drainage aperture 50 is in communication with a water outlet tray 52 secured to a lower surface of the lower end 46. The water outlet tray 52 has an open outer end 54 for positioning adjacent to a sink 20. The open upper end 44 has a plurality of compartments 56 formed therein. The plurality of compartments 56 include compartments for bowls, flatware, and drinking glasses.

In use the present invention would be positioned adjacent to the sink 20 so that recently washed dishes and the like can drain into the sink 20. The present invention allows all types of utensils, flatware, plates, mugs, and glasses to be organized in a manner that will allow them to be removed and replaced in their proper position in a kitchen cabinet or the like.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and the manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as being new and desired to be protected by Letters Patent of the United States is as follows:

1. A drying and organizing rack for holding kitchen utensils, flatware, and china in an organized manner while drying, the rack comprising, in combination:

a support member comprised of a square lower platform having four leg members coupled therewith, the four leg members having lower ends positionable on a recipient surface and upper ends disposed above the lower platform;

a square upper tray secured to the upper ends of the four leg members of the support member, the upper tray being defined by an open upper end, a lower end, and a peripheral side wall, the lower end being slanted toward a central portion thereof, the central portion having a drainage aperture therethrough, the drainage aperture being in communication with a water outlet tray secured to a lower surface of the lower end, the water outlet tray having an open outer end for posi-

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tioning adjacent to a sink, the open upper end having a plurality of compartments formed therein, the plurality of compartments including plate compartments and a main utensil compartment, the peripheral side wall having a plurality of cup hooks secured thereto; and
a square lower tray secured to the four leg members of the support member below the upper tray, the lower tray being defined by an open upper end, a lower end, and a peripheral side wall, the lower end being slanted toward an intermediate portion thereof, the intermediate portion having a drainage aperture therethrough, the drainage aperture being in communication with a water outlet tray secured to a lower surface of the lower end, the water outlet tray having an open outer end for positioning adjacent to a sink, the open upper end having a plurality of compartments formed therein, the plurality of compartments including compartments for bowls, flatware, and drinking glasses.

2. A drying and organizing rack for holding kitchen utensils, flatware, and china in an organized manner while drying, the rack comprising, in combination:

a support member comprised of a square lower platform having four leg members coupled therewith, the four leg members having lower ends positionable on a

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recipient surface and upper ends disposed above the lower platform;

at least an upper and lower tray, secured to the four leg members of the support member in a vertically spaced relationship, each tray being defined by an open upper end, a lower end, and a peripheral side wall, the lower end having a drainage aperture therethrough, the open upper end having a plurality of compartments formed therein, the plurality of compartments being dimensioned for holding utensils, flatware, and china, and the peripheral side wall of at least one of said trays having a plurality of cup hooks secured thereto.

3. The drying and organizing rack for holding kitchen utensils, flatware and china as set forth in claim 2, wherein the closed lower ends of the trays are slanted toward the drainage aperture therethrough.

4. The drying and organizing rack for kitchen utensils, flatware and china as set forth in claim 2, wherein the drainage aperture is in communication with a water outlet tray secured to a lower surface of the lower end, the water outlet tray having an open outer end for positioning adjacent to a sink.

* * * * *

EXHIBIT I



US006446280B1

(12) **United States Patent**
Moore, Jr.

(10) **Patent No.:** **US 6,446,280 B1**
(45) **Date of Patent:** **Sep. 10, 2002**

(54) **SINK ATTACHMENT**

(76) **Inventor:** **Robert F. Moore, Jr.**, 5R Atkinson Rd.,
Salem, NH (US) 03079

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

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(51) **Int. Cl.⁷** **E03C 1/24**

(52) **U.S. Cl.** **4/651; 4/654; 4/641**

(58) **Field of Search** 4/539, 639, 640,
4/641, 642, 638, 654, 517

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Primary Examiner—Gregory L. Huson

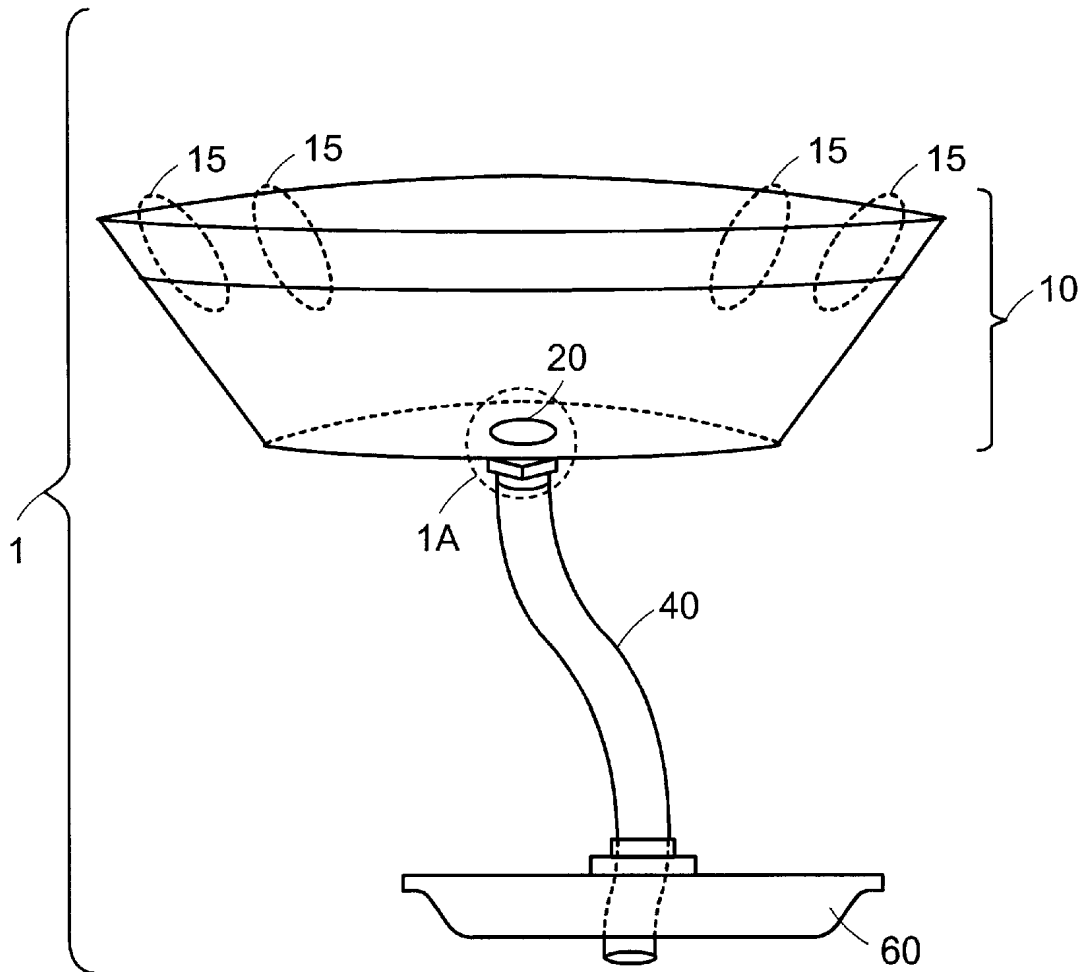
Assistant Examiner—Huyen Le

(74) *Attorney, Agent, or Firm*—Ernest V. Linek; Banner &
Witcoff, Ltd.

(57) **ABSTRACT**

A sink attachment having a basin, a drain tube, and a sealing member is disclosed. The sink attachment provides for simultaneously draining tap water or other liquids and sealing the sink. The attachment may be relocated without having to remove the sealing member from the sink drain.

20 Claims, 5 Drawing Sheets



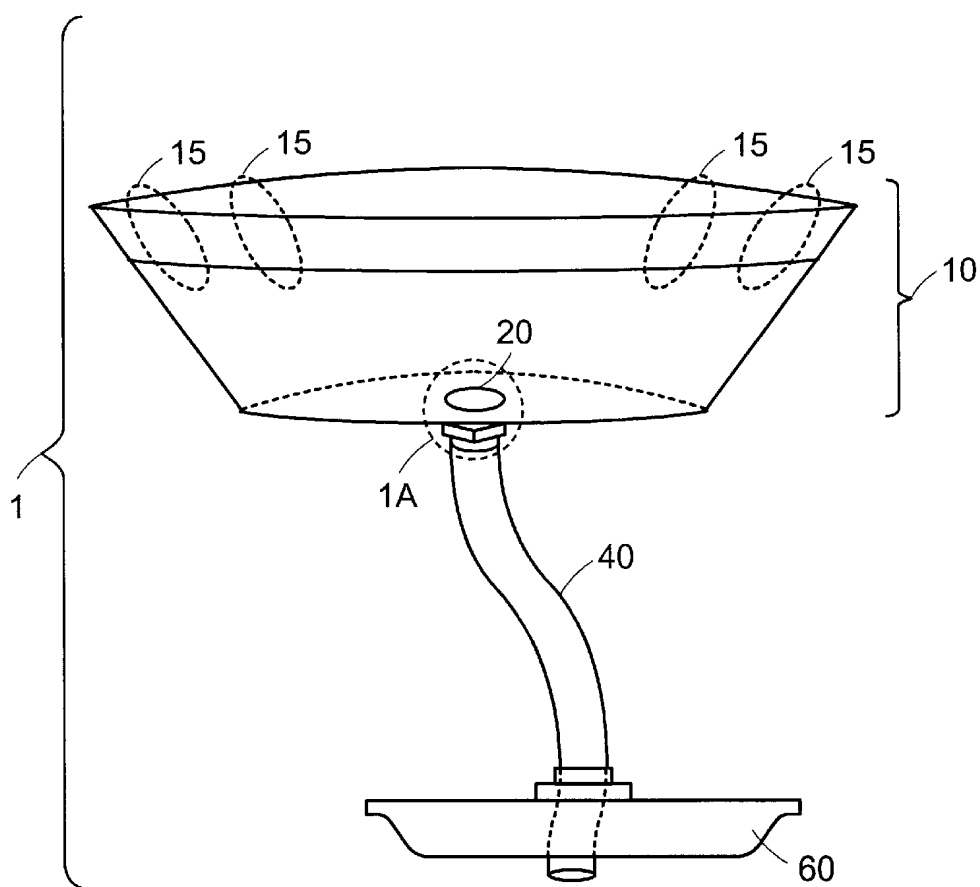


FIG. 1

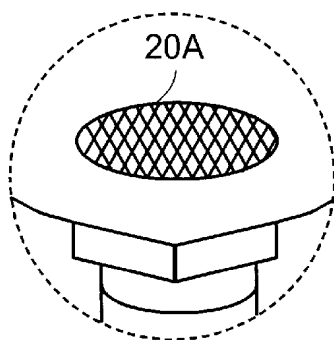


FIG. 1A

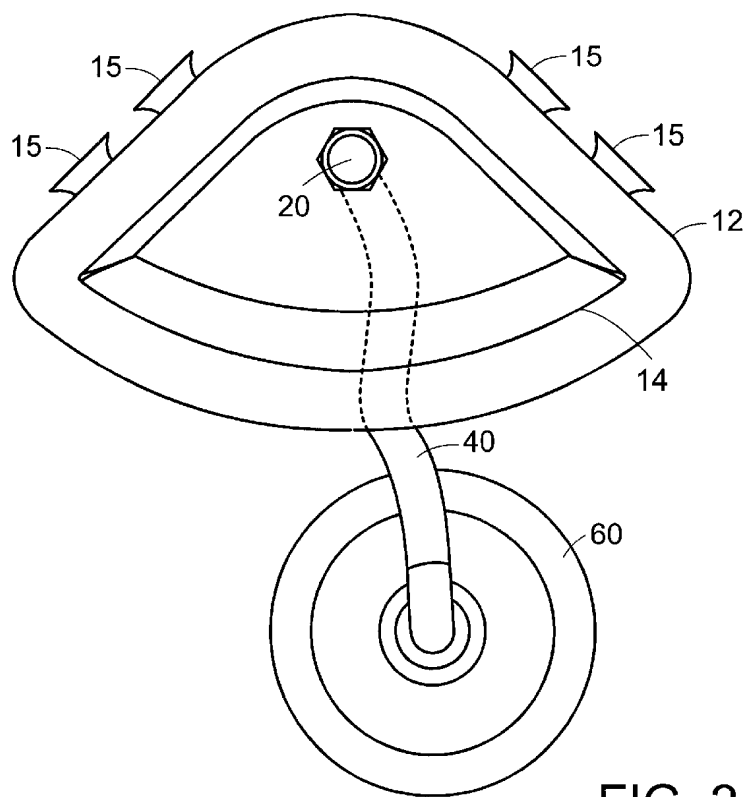


FIG. 2

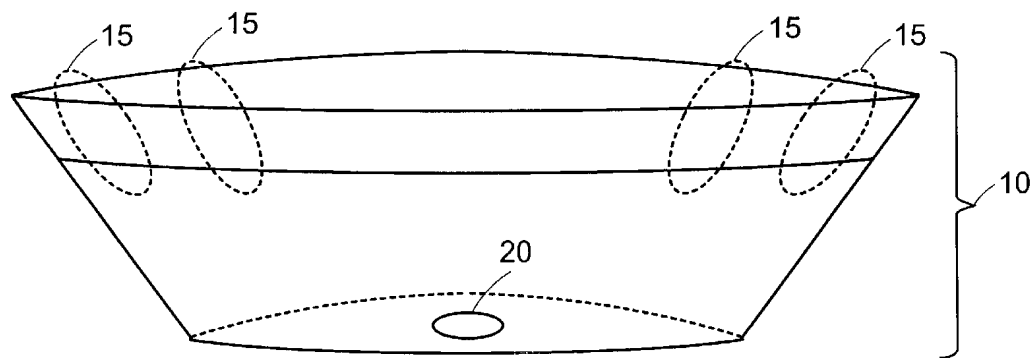


FIG. 3

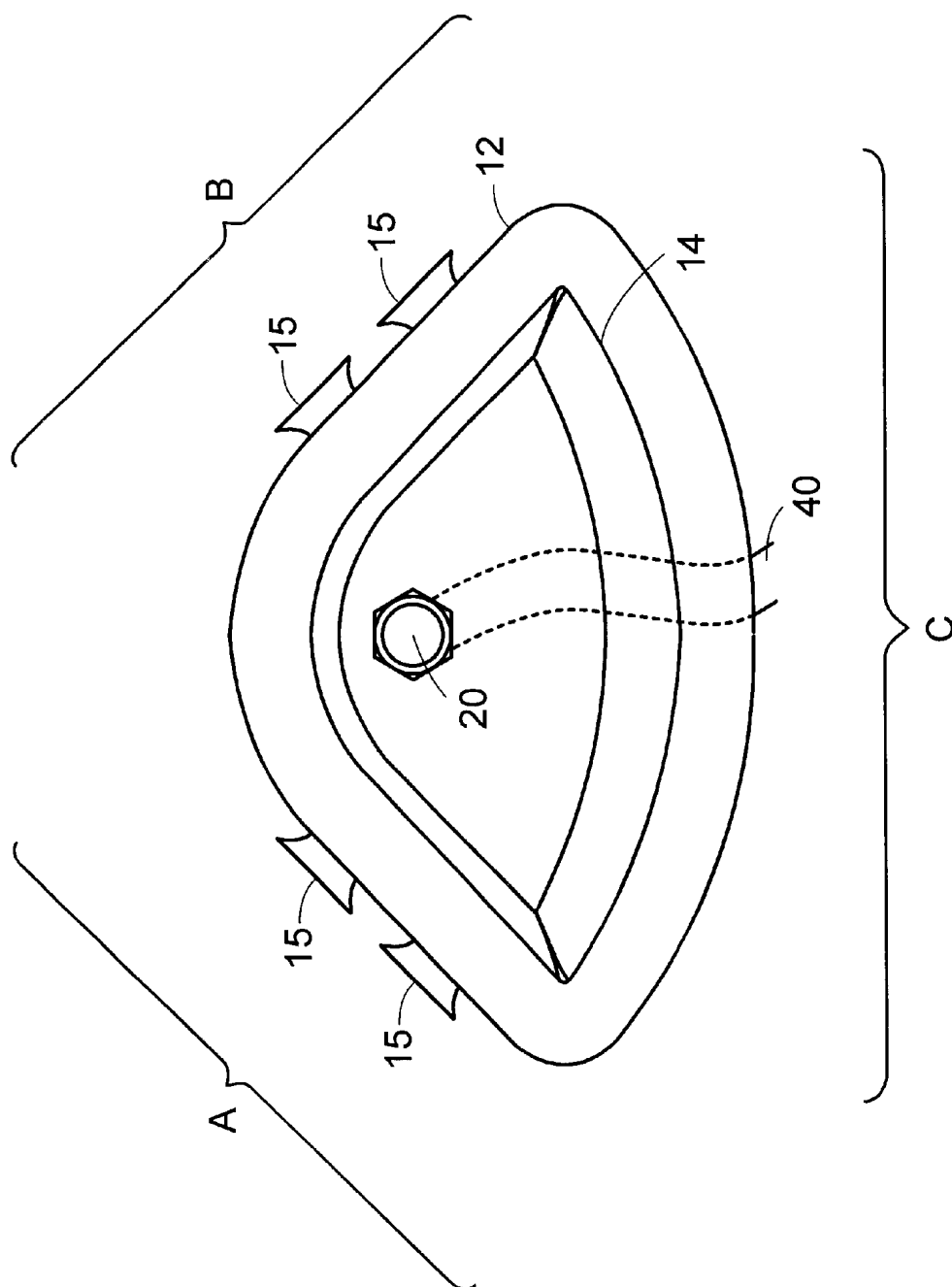
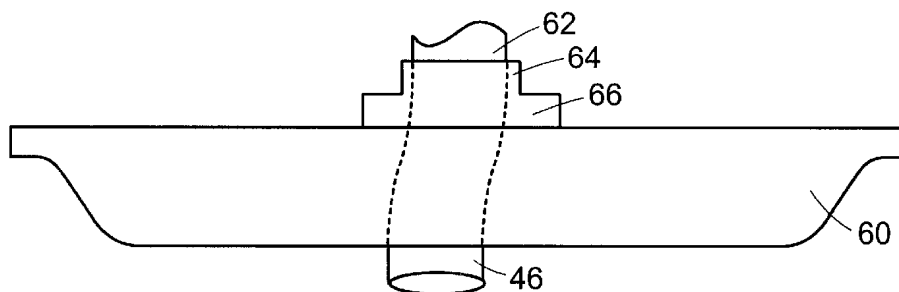
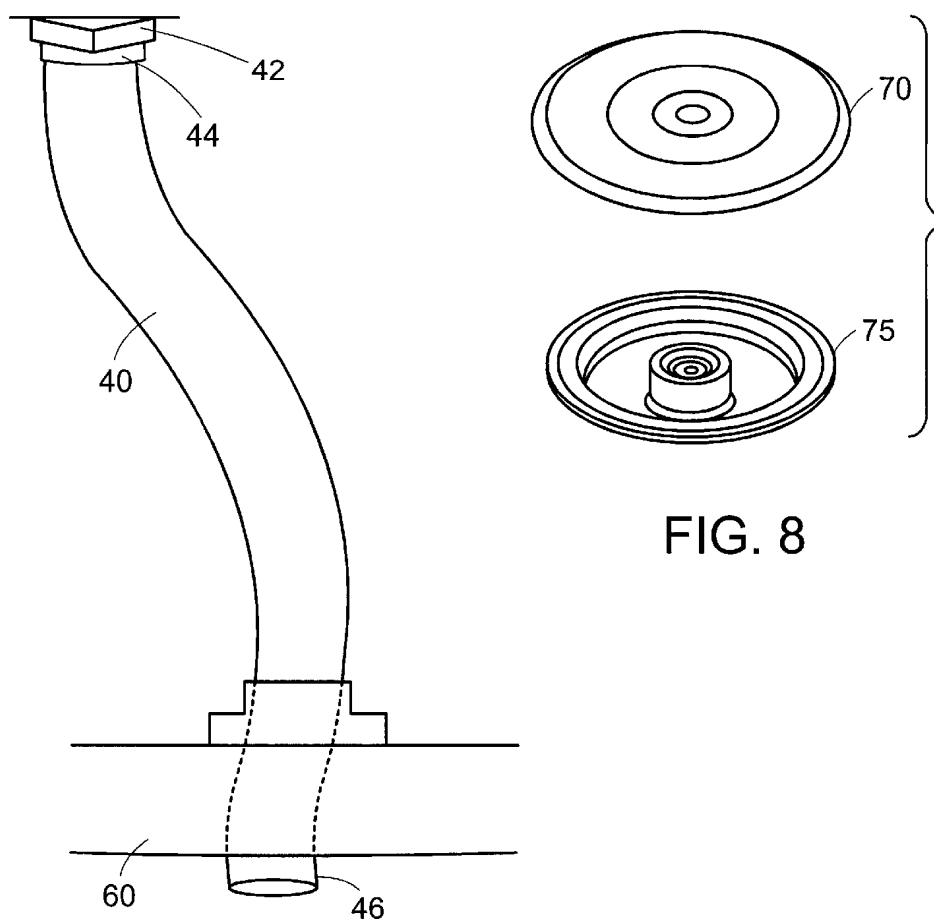


FIG. 4



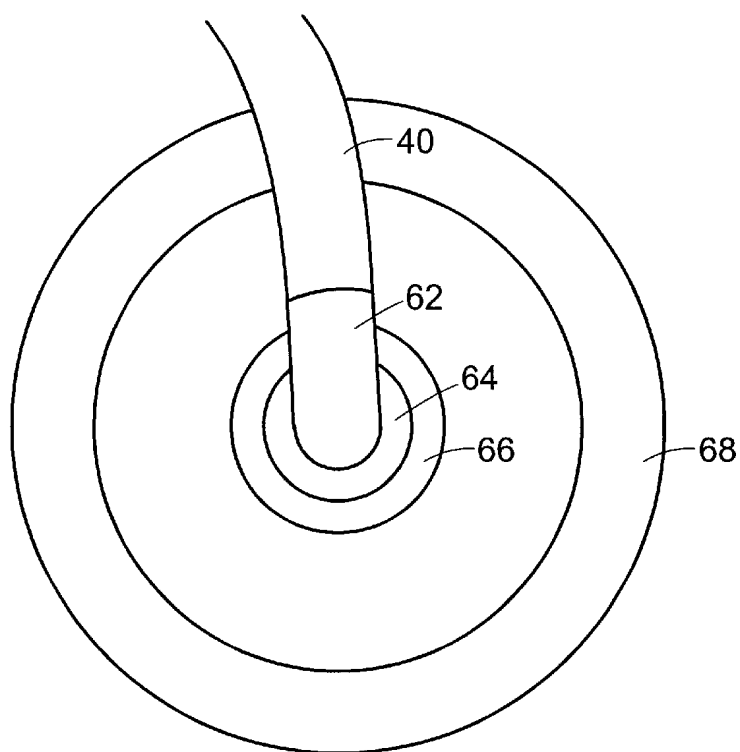


FIG. 7

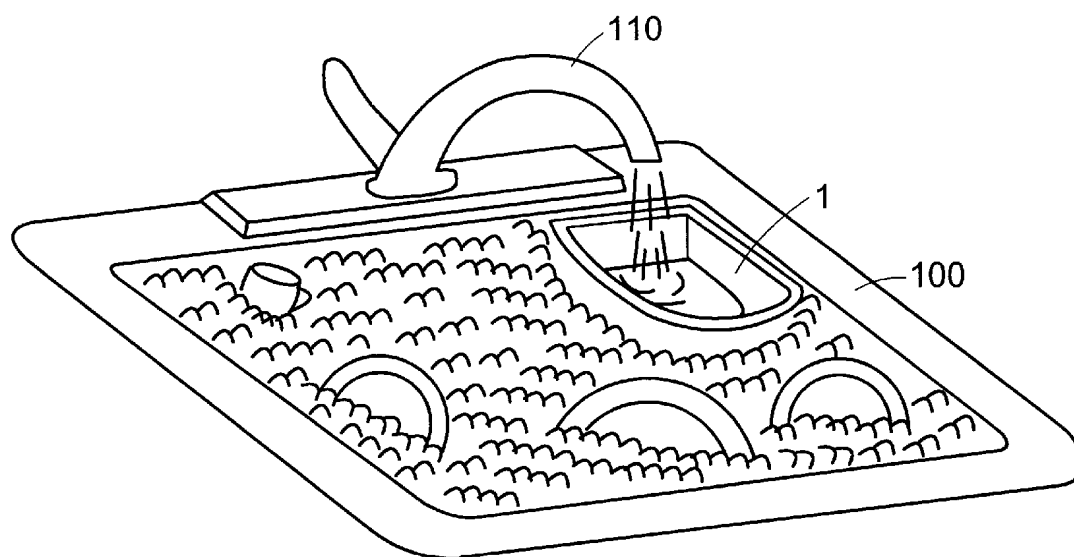


FIG. 9

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SINK ATTACHMENT**BACKGROUND OF THE INVENTION****1. Field of the Invention**

The present invention relates to an attachment for sinks. Specifically, this invention relates to an attachment for a sink that provides an apparatus for draining water flowing from a tap while maintaining a sealed sink.

2. Background

Single basin sinks present several drawbacks with respect to washing articles in the sink. Once the sink drain is sealed, liquid flowing from a tap may not be drained. As the volume of liquid added to the sink increases the sink may begin to overflow. Therefore, during the article washing or rinsing process, the sink drain must be opened at regular intervals to reduce the volume of liquid in the sink. This process reduces the efficiency of washing or rinsing articles.

Several devices exist to avoid the problem described above. For example, an hourglass-shaped receptacle is described in U.S. Pat. No. 2,988,755. Other sink receptacles are described in U.S. Pat. Nos. 3,070,812, 3,289,218, 4,128,905, 5,435,022, 4,648,140 and 4,698,861. Each of these receptacles allow for draining of tap water while the sink is sealed, but each receptacle comprises a rigid immobile structure that occupies the center of the sink. Therefore, the location of these devices is not ideal, and the location may not be changed readily after the device is put into place without unsealing the sink.

A portable sink attachment is described in U.S. Pat. No. 4,370,762 titled "Portable Attachment for Sinks." The device contains an upper wide mouth connected to an elbow that is relatively flat. The elbow is connected to a sealing means that plugs the sink. Unlike the previous devices, this device does not occupy the center of the sink. This device, however, is not attached to the sides of the sink.

Several means are known for attachment of devices to sinks. One such device is described in U.S. Pat. No. 4,531,246. The device has a cylindrical ring and removable means for attachment. The removable mounting means are positioned ninety degrees from each other and secure the device to the sink.

There exists a need in the art for a sink attachment that provides an apparatus for draining liquids while simultaneously sealing the sink. The device should require a minimum amount of sink space and should be securely, but removably, attached to the sink.

SUMMARY OF THE INVENTION

Now there is provided by the present invention a sink attachment that provides for draining of tap water while simultaneously sealing the sink. The device is mobile, flexible, removable and occupies limited space in the sink.

It is therefore, a principal object of the present invention to provide a sink attachment that fits into a sink and seals the drain of the sink effectively preventing any liquid in the sink from draining out. The use of this sink attachment allows the sink to be filled with a liquid, i.e. filled with soapy water to wash dishes, but provides an avenue for draining any liquid that flows from a tap, i.e. water that may be used to rinse the dishes.

In a first embodiment, the sink attachment comprises a basin, a drain tube, and a sealing member. The basin may be removably attached to the sink using an attaching member. The attaching member may be any device or material that provides for reversible attachment including two sided tape,

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Velcro, magnets, or suction cups. Preferably the attaching member is suction cups. The drain tube and the basin are in communication, and a liquid-tight seal is created when the drain tube is connected to an opening in the basin. This liquid-tight seal prevents water from leaking out of the sink attachment and into the sink. The liquid-tight seal also prevents water in the sink from leaking into the sink attachment to prevent draining of the water from the sink. The method of connecting the drain tube to the basin may be any method known to those skilled in the art. Preferably the drain tube is connected to the basin using one or more devices, such as fittings selected from the group consisting of compression fittings, PVC fittings, bulkhead fittings, flare fittings, and couplers. Optionally, the drain tube may be permanently fixed to the basin using adhesives or the like.

The drain tube is in communication with a sealing member. A liquid tight seal is also created between the drain tube and the sealing member. The drain tube is connected to the sealing member using one or more devices, such as the fittings and devices described hereinabove. The drain tube may also be attached to the sealing member using an adhesive.

The sealing member fits over the sink drain to retain water in the sink. The sealing member may be any apparatus that creates a liquid tight seal between the sealing member and the sink drain. More preferably the sealing member is any standard sink stopper or garbage disposal stopper. Most preferably the sealing member is a flat sink stopper or a garbage disposal stopper. Upon contacting the sink drain, the flat sink stopper and the garbage disposal stopper create a suction to prevent liquid from draining out of the sink.

The components of the sink attachment may be made from numerous materials. These materials include plastics, rubber, polymers, metals, Plexiglas®, glass, ABS, or combinations thereof. The metal material may be any metal material but is preferably a metal that is resistant to rusting and tarnishing, such as brass. Optionally, the metal may be galvanized or coated with a substance, such as Teflon, to prevent rusting and to increase the life of the sink attachment.

In a second embodiment, the basin further comprises a screen located in an opening in the basin. The screen prevents particulate matter from entering into the drain tube and potentially clogging the sink.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other features and advantages of the present invention will become more apparent in view of the following detailed description in conjunction with the accompanying drawings, of which:

FIG. 1 is a side view of the sink attachment in accordance with the present invention;

FIG. 2 is a top view of the sink attachment in accordance with the present invention;

FIG. 3 is a side view of the basin of the sink attachment in accordance with the present invention;

FIG. 4 is a top view of an embodiment of the basin of the sink attachment in accordance with the present invention;

FIG. 5 is a side view of the drain tube in accordance with the present invention;

FIG. 6 is a side view of an embodiment of a sealing member in accordance with the present invention;

FIG. 7 is a top view of an embodiment of a sealing member in accordance with the present invention;

FIG. 8 is a perspective view of additional embodiments of a sealing member; and

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FIG. 9 is a perspective view of the sink attachment placed in a sink in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiment of the present invention will be described herein with reference to illustrative embodiments of a sink attachment which follows.

Referring to FIG. 1 and FIG. 2, there is shown the sink attachment of the present invention generally referred to as numeral 1. The sink attachment comprises a basin 10 having at least one attaching member 15. The basin portion may comprise any geometric shape but is preferably shaped to fit into a corner of a standard kitchen sink. As used herein, standard kitchen sink means any kitchen sink used in the United States or in foreign countries. Preferably standard kitchen sink means those kitchen sinks used in homes and businesses throughout the United States.

The basin is preferably attached to the sides of the sink to facilitate washing of dishes or articles that are in the sink. Attachment of the basin to the sides of the sink maximizes the amount of space available for soaking or washing dishes or articles. The attaching member may be any apparatus that attaches the basin to one or more sides of the sink. The attaching member is preferably at least one small magnets or at least one suction cup. More preferably, the attaching member comprises a total of two suction cups where one suction cup is positioned on one face of the basin and the other suction cup is positioned on an adjacent face of the basin. Most preferably, the attaching member comprises a total of four suction cups where two suction cups are positioned on one face of the basin and the other two suction cups are positioned on an adjacent face of the basin (see 15 in FIG. 2). One skilled in the art would recognize that other attaching members may be used to secure the basin to the sides of the sink.

Referring to FIG. 1, the lower portion of the basin comprises an opening 20. Attached to the opening 20 is a drain tube 40. The drain tube 40 connects to a sealing member 60 for sealing the drain of a sink. Therefore, the liquid flows into the basin, through the drain tube, and into the sink drain that is sealed by the sealing member. The sealing member may be any device that fits over the drain of a sink and creates a liquid tight seal. Most preferably the sealing member is a flat sink stopper or a garbage disposal stopper. Both the flat sink stopper and the garbage disposal stopper create a suction that prevents liquid from leaking out of the sink. Additionally, the flat sink stopper or the garbage disposal stopper is easily removed when the sink needs draining.

Referring to FIG. 3 and FIG. 4, a first embodiment of a basin 10 is shown. The basin comprises an outer wall 12 and an inner wall 14. The basin and the walls may be made of any material. Preferably the basin and the walls are composed of material selected from plastics, rubber, polymers, metals, Plexiglas®, glass, ABS, or combinations thereof. The basin may have any geometric shape or dimensions capable of fitting into a corner of a sink. In a preferred embodiment, the basin 10 comprises three faces A, B, and C which form a triangular shape comprising round corners (see FIG. 4). In preferred embodiments, face C is approximately 5–12 inches long and faces A and B are each approximately 3–9 inches long. In the most preferred embodiment, face C is 8 inches long from corner to corner and faces A and B are each 5 inches long from corner to corner. One skilled in the art would recognize that the length of the sides may be

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altered to fit into any sink including sinks used in the United States as well as sinks used in foreign countries. Attached to sides A and B are at least one attaching member 15. More preferably attached to each side A and B are two attaching members. The attaching members located on sides A and B are in communication with the sides of the sink. Preferably the attaching members are suction cups. Side C faces outward towards the center of the sink. Since the sink attachment sits in the corner of the sink, the remaining portion of the sink is free for washing or rinsing articles.

The opening 20 of the basin comprises a fitting that extends below the basin for receiving a drain tube 40. In preferred embodiments, the fitting is threaded and capable of receiving a nut. In other preferred embodiments, the fitting is a plastic or glass connector capable of receiving a drain tube and creating a liquid tight seal without using a nut. Examples of such embodiments are the glass and polypropylene connectors that are commercially available from Fisher Scientific (Pittsburgh, Pa.), which are used for connecting pieces of tubing such as Tygon® tubing. The fitting may be attached to the basin using an epoxy, an adhesive, welding, soldering, or other methods that create a liquid tight seal between the fitting and the basin. The fitting may optionally be manufactured as an integrated part of the basin.

Referring to FIG. 5, a drain tube 40 comprising an upper end 44 and a lower end 46 is shown. The upper end 44 of the drain tube 40 attaches to the fitting of the basin. A liquid-tight seal is created by inserting the upper end 44 of the drain tube 40 into the drain fitting of the sink. In this embodiment, the drain tube is held in place using a nut 42. Optionally a washer may be inserted around the upper end 44 of the drain tube 40, prior to tightening the nut 42, to enhance the liquid-tight seal.

At the opposite end of the drain tube 40, the lower end 46 is in communication with the sealing member 60. Referring to FIG. 6 and FIG. 7, the lower end 46 couples to a fitting 62 of the sealing member 60. Fitting 62 is preferably made of plastic, PVC, ABS, or other material that creates a liquid tight seal when the lower end 46 of the drain tube 40 is attached to the sealing member 60. Fitting 62 may comprise any or all of the fittings discussed herein including straight fittings, elbow fittings, and the like. Fitting 62 may be attached using an epoxy, an adhesive, welding, soldering or other methods that create a liquid tight seal between the fitting and the sealing member. The fitting may optionally be manufactured as an integrated part of the sealing member.

Several embodiments of a sealing member are shown in FIG. 8. A first embodiment of a sealing member comprises a flat sink stopper 70. A second embodiment of a sealing member comprises a standard garbage disposal stopper 75. One skilled in the art would recognize that different shapes and sizes of sealing members exist that may be used to create a liquid-tight seal between the sink drain and the sink attachment. For example, the technology described herein may be adapted for use in a sink comprising an ovoid shaped drain by providing an ovoid shaped sealing member.

Referring to FIG. 9, to use the sink attachment for washing dishes, the sealing member is first put into place over the drain of the sink. The basin is then attached to the sink 100 using the attaching member of the basin. The sink may then be filled with water, detergent, or other liquids. During the course of washing dishes, tap water may be used to rinse the dishes by placing a dish over the sink attachment and running water onto the dish and into the basin of the sink attachment. The rinse water drains through the sink attachment thus preventing loss of suds in the sink.

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One skilled in the art would recognize that the sink attachment described herein may be used in any situation where a liquid holding vessel, such as a sink, comprises a single basin, and where more than one liquid must be used to complete the desired process. For example, the chemical industry might use the sink attachment for washing or rinsing glassware. Glassware may be placed into the sink for washing or soaking. The sink may then be filled with a detergent or a chemical solution, such as a basic solution, for washing the glassware. If a base bath is used, each piece of glassware may be placed above the sink attachment and rinsed with a neutralizing solution, such as a mild acid. The use of this sink attachment would prevent neutralization of the basic solution in the sink.

The attachment may also be used by the automotive industry. Many avenues of the auto repair industry require that residual material be removed from auto parts before installation into an automobile. The parts are often soaked in a hydrocarbon solution such as kerosene. The sink attachment may be used to rinse the auto parts after soaking in the kerosene bath. Therefore, any particulate matter in the hydrocarbon bath would not contaminate the parts.

Although the invention has been shown and described with respect to exemplary embodiments thereof, various other changes, additions and omissions in the form and detail thereof may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. A sink attachment comprising:

a basin,

at least one attaching member, the attaching member is attached to the basin,

a sealing member, and

a drain tube having a first end and a second end, the first end is connected to an opening in the basin, the second end is connected to an opening in the sealing member.

2. The sink attachment of claim 1, wherein the basin and the sealing member independently comprise fittings at the opening in the basin and the opening in the sealing member.

3. The sink attachment of claim 2, wherein the fittings are independently selected from the group consisting of straight fittings, elbow fittings, PVC fittings, compression fittings, bulkhead fittings, flare fittings, and couplers.

4. The sink attachment of claim 1, wherein the attaching member is selected from the group consisting of suction cups, magnets, tape, and Velcro.

5. The sink attachment of claim 1, wherein the basin comprises an inner wall, an outer wall, and a bottom surface.

6. The sink attachment of claim 5, wherein the basin has a triangular shape comprising round corners.

7. The sink attachment of claim 1, wherein the basin is made from a material selected from the group consisting of plastics, rubber, polymers, metals, Plexiglas, ABS, and glass.

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8. The sink attachment of claim 1, wherein the drain tube is made from a material selected from the group consisting of plastics, rubber, polymers, metals, Plexiglas, ABS, and glass.

9. The sink attachment of claim 1, wherein the sealing member is from a material selected from the group consisting of plastics, rubber, polymers, metals, Plexiglas, ABS, and glass.

10. The sink attachment of claim 1, wherein the basin comprises a screen located in the opening in the basin, the screen prevents particulate matter from entering into the drain tube.

11. The sink attachment of claim 1, wherein the sealing member is a flat disc that engages the sink drain to form a liquid-tight seal.

12. The sink attachment of claim 1, wherein the sealing member is a flat sink stopper or a garbage disposal stopper.

13. A method of using a sink attachment comprising:

providing a sink attachment, the sink attachment comprising a basin, a least one attaching member, the attaching member is attached to the basin, a sealing member, and a drain tube having a first end and a second end, the first end is connected to an opening in the basin, the second end is connected to an opening in the sealing member,

engaging a sink drain with the sealing member to create a liquid-tight seal,

engaging the attaching member of the basin with at least one side of a sink, and

filling the sink with a liquid.

14. The method of claim 13, further comprising:

disengaging the basin from the side of the sink by disengaging the attaching member, and reengaging the attaching member of the basin to different sides of the sink.

15. The method of claim 13, wherein the attaching member is selected from the group consisting of suction cups, magnets, tape, and Velcro.

16. The method of claim 13, wherein the basin comprises an inner wall, an outer wall, and a bottom surface.

17. The method of claim 13, wherein the basin, the drain tube, and the sealing member are independently made from a material selected from the group consisting of plastics, rubber, polymers, metals, Plexiglas, ABS, and glass.

18. The method of claim 13, wherein the basin comprises a screen located in the opening in the basin, the screen prevents particulate matter from entering into the drain tube.

19. The method of claim 13, wherein the sealing member is a flat disc that engages the sink drain to form a liquid-tight seal.

20. The method of claim 13, wherein the sealing member is a flat sink stopper or a garbage disposal stopper.

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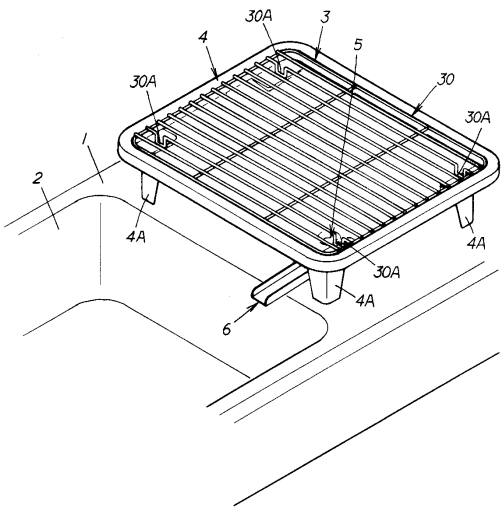
(54) 【発明の名称】 水切り部材受具並びに水切り装置

(57) 【要約】

【課題】 水切り後にトレイ体内の水をシンクに流さずとも、トレイ体内に受けた水が自動的にシンクへ排水される水切り部材受具並びに水切り装置を提供すること。

【解決手段】 流し台天面部 1 のシンク 2 脇に載置し得、且つ水切り部材 3 を載置支承し得るトレイ体 4 の底部に排水孔 5 を設け、この排水孔 5 に排水方向を規制する導水部 6 を設けてトレイ体 4 で受けた水を、排水孔 5、導水部 6 を介して排水し得るように構成し、この導水部 6 を旋回自在に設けて排水方向を変更し得るように構成し、少なくともこの導水部 6 を前記シンク 2 へ向けた際、前記導水部 6 から排水される水は、シンク 2 内へ排水されるように構成する。

【選択図】 図 1



【特許請求の範囲】

【請求項 1】

流し台天面部のシンク脇に載置し得、且つ水切り部材を載置支承し得るトレー体の底部に排水孔を設け、この排水孔に排水方向を規制する導水部を設けてトレー体で受けた水を、排水孔、導水部を介して排水し得るように構成し、この導水部を旋回自在に設けて排水方向を変更し得るように構成し、少なくともこの導水部を前記シンクへ向けた際、前記導水部から排水される水は、シンク内へ排水されるように構成したことを特徴とする水切り部材受具。

【請求項 2】

前記導水部は、少なくともこの導水部を前記シンクへ向けて前記トレー体の外方へ向けた際に、トレー体の外周縁よりも外方へ突出するように構成したことを特徴とする請求項 1 記載の水切り部材受具。 10

【請求項 3】

前記導水部の旋回移動によって排水阻止状態と排水状態とを切り替える排水阻止機構を前記排水孔と導水部とのいずれか一方若しくは双方に設け、この導水部が前記シンク方向を向かずにトレー体の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では排水を阻止する構成としたことを特徴とする請求項 1，2 のいずれか 1 項に記載の水切り部材受具。

【請求項 4】

前記排水孔と前記導水部とに通水連通部を設け、この通水連通部を、前記導水部が前記シンク方向を向かずにトレー体の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では非連通状態として排水を阻止し、この排水阻止状態から導水部がシンク方向を向くように旋回移動した際に連通状態として排水可能とする排水阻止機構を前記排水孔と導水部とのいずれか一方若しくは双方に設けたことを特徴とする請求項 1～3 のいずれか 1 項に記載の水切り部材受具。 20

【請求項 5】

前記排水孔に前記導水部の基部を旋回自在に連結し、この排水孔と導水部の基部とに導水部の旋回位置によって連通する前記通水連通部を設けると共に、この通水連通部は、導水部がシンク方向を向くように旋回移動した際に連通する構成としたことを特徴とする請求項 4 記載の水切り部材受具。 30

【請求項 6】

前記請求項 1～5 のいずれか 1 項に記載の水切り部材受具と、この水切り部材受具のトレー体に載置支承する水切り柵や水切り籠などの水切り部材とから成ることを特徴とする水切り装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】

本発明は、流し台のシンク脇に設置して使用する水切り部材受具並びに水切り装置に関するものである。

【0002】

【従来の技術及び発明が解決しようとする課題】

従来、例えば、水溜用のトレー体内に水切り柵や水切り籠などの水切り部材を配設した構成の水切り装置がある。

【0003】

この水切り装置は、流し台天面部のシンク脇に載置しておき、シンク内で洗浄した食器などを水切り部材の上に一時載せておくと、食器から水が切れてトレー体内に落下し溜まるもので、水切り部材上の食器などを片付けた後は、トレー体内に溜まった水をシンクへ流すようにして使用するものであった。

【0004】

本発明は、この種水切り装置の改良に係るもので、水切り後にトレー体内の水をシンクに 50

流す作業を要せずとも、トレイ体内に受けた水が自動的にシンクへ排水される極めて便利な水切り部材受具並びに水切り装置を提供するものである。

【0005】

【課題を解決するための手段】

添付図面を参照して本発明の要旨を説明する。

【0006】

流し台天面部1のシンク2脇に載置し得、且つ水切り部材3を載置支承し得るトレイ体4の底部に排水孔5を設け、この排水孔5に排水方向を規制する導水部6を設けてトレイ体4で受けた水を、排水孔5、導水部6を介して排水し得るように構成し、この導水部6を旋回自在に設けて排水方向を変更し得るように構成し、少なくともこの導水部6を前記シンク2へ向けた際、前記導水部6から排水される水は、シンク2内へ排水されるように構成したことを特徴とする水切り部材受具に係るものである。

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【0007】

また、前記導水部6は、少なくともこの導水部6を前記シンク2へ向けて前記トレイ体4の外方へ向けた際に、トレイ体4の外周縁よりも外方へ突出するように構成したことを特徴とする請求項1記載の水切り部材受具に係るものである。

【0008】

また、前記導水部6の旋回移動によって排水阻止状態と排水状態とを切り替える排水阻止機構7を前記排水孔5と導水部6とのいずれか一方若しくは双方に設け、この導水部6が前記シンク2方向を向かずにトレイ体4の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では排水を阻止する構成としたことを特徴とする請求項1、2のいずれか1項に記載の水切り部材受具に係るものである。

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【0009】

また、前記排水孔5と前記導水部6とに通水連通部8を設け、この通水連通部8を、前記導水部6が前記シンク2方向を向かずにトレイ体4の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では非連通状態として排水を阻止し、この排水阻止状態から導水部6がシンク2方向を向くように旋回移動した際に連通状態として排水可能とする排水阻止機構7を前記排水孔5と導水部6とのいずれか一方若しくは双方に設けたことを特徴とする請求項1～3のいずれか1項に記載の水切り部材受具に係るものである。

【0010】

また、前記排水孔5に前記導水部6の基部を旋回自在に連結し、この排水孔5と導水部6の基部とに導水部6の旋回位置によって連通する前記通水連通部8を設けると共に、この通水連通部8は、導水部6がシンク2方向を向くように旋回移動した際に連通する構成としたことを特徴とする請求項4記載の水切り部材受具に係るものである。

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【0011】

また、前記請求項1～5のいずれか1項に記載の水切り部材受具と、この水切り部材受具のトレイ体4に載置支承する水切り柵や水切り籠などの水切り部材3とから成ることを特徴とする水切り装置に係るものである。

【0012】

【発明の実施の形態】

好適と考える本発明の実施の形態（発明をどのように実施するか）を、図面に基づいてその作用効果を示して簡単に説明する。

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【0013】

流し台天面部1のシンク2脇にトレイ体4を載置し、このトレイ体4上に水切り部材3を載置する。

【0014】

また、トレイ体4底部の導水部6を旋回させて排水方向をシンク2に向けておく。

【0015】

水切り部材3上にシンク2内で洗浄した食器などを載置すると、食器などに付着した水滴が水切り部材3を介してトレイ体4内へと落下するが、トレイ体4が受けた水は、トレイ

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体 4 内で溜まることなく、排水孔 5 並びにシンク 2 に向けた導水部 6 を介してシンク 2 内へと排水することになる。

【 0 0 1 6 】

従って、導水部 6 を予めシンク 2 に向けておくことで、トレイ体 4 内に落ちた水が自動的にシンク 2 へと排出されるので、従来製品のように水切りした食器などを片付けた後にトレイ体内に溜まった水を流すような手間がなく、非常に便利となり、また、導水部 6 をシンク 2 へ向ける作業も導水部 6 を単に旋回させるだけで容易に行うことができる。

【 0 0 1 7 】

また、例えば、前記導水部 6 は、少なくともこの導水部 6 を前記シンク 2 へ向けて前記トレイ体 4 の外方へ向けた際に、トレイ体 4 の外周縁よりも外方へ突出するように構成すれば、シンク 2 脇にトレイ体 4 を設置した際にこのトレイ体 4 より外方へ突出する導水部 6 を確実にシンク 2 内の上方へ配設することができ、これにより導水部 6 からの排水が流し台天面部 1 にこぼれるようなことなく、確実にシンク 2 内へ排水されることになり、一層実用的となる。

【 0 0 1 8 】

また、例えば、前記導水部 6 の旋回移動によって排水阻止状態と排水状態とを切り替える排水阻止機構 7 を前記排水孔 5 と導水部 6 とのいずれか一方若しくは双方に設け、この導水部 6 が前記シンク 2 方向を向かずにトレイ体 4 の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では排水を阻止する構成とすれば、導水部 6 をシンク 2 に向けていない時に誤って水切り棚 3 A 上に洗浄した食器などを載置しても、トレイ体 4 で受けた水が導水部 6 から流し台天面部 1 に流れ出てしまうような不都合がなく、一層実用的となる。

【 0 0 1 9 】

また、例えば、前記排水孔 5 と前記導水部 6 とに通水連通部 8 を設け、この通水連通部 8 を、前記導水部 6 が前記シンク 2 方向を向かずにトレイ体 4 の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では非連通状態として排水を阻止し、導水部 6 がシンク 2 方向を向くように旋回移動した際に連通状態として排水可能とする排水阻止機構 7 を前記排水孔 5 と導水部 6 とのいずれか一方若しくは双方に設ければ、前記作用・効果を確実に発揮する排水阻止機構 7 を簡易に設計実現可能となり、一層実用的となる。

【 0 0 2 0 】

また、例えば、前記排水孔 5 に前記導水部 6 の基部を旋回自在に連結し、この排水孔 5 と導水部 6 の基部とに導水部 6 の旋回位置によって連通する前記通水連通部 8 を設けると共に、この通水連通部 8 は、導水部 6 がシンク 2 方向を向くように旋回移動した際に連通する構成とすれば、前記作用・効果を確実に発揮する排水阻止機構 7 を一層簡易構造により設計実現可能となり、一層実用的となる。

【 0 0 2 1 】

【実施例】

本発明の具体的な実施例について図面に基づいて説明する。

【 0 0 2 2 】

本実施例は、流し台天面部 1 のシンク 2 脇に載置する水受用のトレイ体 4 と、このトレイ体 4 上に載置支承する水切り部材 3 とから成る水切り装置に係るものである。

【 0 0 2 3 】

具体的に説明すると、水切り部材 3 は、図 1 に示すように、線材を組んで形成した略方形板状の水切り棚 3 0 を採用し、この水切り棚 3 A の四隅付近に位置する栈杆（線材）の一部を下方へ屈曲形成してトレイ体 4 の内側底面に載置する脚部 3 0 A としている。

【 0 0 2 4 】

トレイ体 4 は、図 2 に示すように、水切り棚 3 A を収納配設し得る大きさの略方形状の浅底容体に形成し、底部四隅に脚部 4 A を一体的に垂設して、この脚部 4 A により流し台天面部 1 から底部が所定高さ浮上した状態で載置する構成としている。

【 0 0 2 5 】

また、このトレイ体 4 の内側（上面側）の底面部四隅に載置面部 4 B を形成し、この載置面部 4 B に水切り柵 3 0 の前記脚部 3 0 A や四隅の周縁部を載置することで水切り柵 3 0 をトレイ体 4 上に安定的に載置できるように構成している。

【 0 0 2 6 】

また、図 7 では、水切り部材 3 の別例として水切り籠 3 1 を採用した場合を示しているもので、この水切り籠 3 1 を採用した場合も、載置面部 4 B に底部四隅の脚部 3 1 A を載置することで、水切り籠 3 1 をトレイ体 4 上に安定的に載置できる構成としている。

【 0 0 2 7 】

本実施例は、トレイ体 4 の底部に排水孔 5 を設け、この排水孔 5 に排水方向を規制する導水部 6 を設け、この導水部 6 を旋回自在に設けて排水方向を変更し得るように構成し、少なくともこの導水部 6 を前記シンク 2 へ向けた際、前記トレイ体 4 で受けた水は排水孔 5 並びに導水部 6 を介してシンク 2 内へ排水し得るように構成している。 10

【 0 0 2 8 】

具体的に説明すると、排水孔 5 は、前記トレイ体 4 の四隅のうちの一の底部隅部付近に丸孔を貫通形成して構成している。また、図 2 に示すように、トレイ体 4 の内側底面は、この排水孔 5 に向かって傾斜する形状に形成し、このトレイ体 4 内底面で受けた水が排水孔 5 に向かって流れ込むように構成している。

【 0 0 2 9 】

また、この排水孔 5 の孔縁に沿って、トレイ体 4 の外側底面より下方へ円筒状に突出する突出筒部 5 A を形成している。 20

【 0 0 3 0 】

導水部 6 は、図 3 に示すように、長さのある断面コ字状の樋形体に形成し、基端部には前記突出筒部 5 A に被嵌連結する円筒状の連結筒部 6 A を上方へ向けて突設している。

【 0 0 3 1 】

また、排水孔 5 と導水部 6 の連結構造は、前記突出筒部 5 A の外周面にこの突出筒部 5 A の周方向に水平に長さを有する凸条 9 を突設する一方、前記連結筒部 6 A の内周面にこの連結筒部 6 A の周方向に水平に長さを有する凹条 1 0 を凹設し、この連結筒部 6 A を突出筒部 5 A に被嵌した上、凸条 9 を凹条 1 0 に圧入係合することで突出筒部 5 A に対して連結筒部 6 A が抜け止め状態となり、且つ係合する凸条 9 と凹条 1 0 とをガイドとして導水部 6 を突出筒部 5 A に対して水平方向に 3 6 0 度旋回可能となるように連結した構造としている。 30

【 0 0 3 2 】

即ち、本実施例では、前記脚部 4 A によって生じる流し台天面部 1 とトレイ体 4 底面との間の浮上空間部に導水部 6 を旋回自在に設けた構成としているもので、前述したこの脚部 4 A によるトレイ体 4 底部の流し台天面部 1 に対する所定の浮上高さは、導水部 6 が流し台天面部 1 に接触することなく旋回動できる高さに設定構成している。

【 0 0 3 3 】

また、本実施例では、前記導水部 6 は、この導水部 6 を前記シンク 2 へ向けて前記トレイ体 4 の外方へ向けた際に、トレイ体 4 の外周縁よりも外方へ突出するように構成している。 40

【 0 0 3 4 】

具体的に説明すると、図 4 に示すように、前記排水孔 5 を形成した隅部付近に近接するトレイ体 4 の外周の二縁に対して導水部 6 を外側に向けた際に、この導水部 6 の先端部がこの外周の二縁よりもトレイ体 4 の外側に突出するように導水部 6 の長さ寸法を設定構成している。

【 0 0 3 5 】

従って、図 1 に示すように、シンク 2 脇に前記外周の二縁が臨設するようにしてトレイ体 4 を設置して導水部 6 をシンク 2 に向けた際には、このトレイ体 4 より外方へ突出する導水部 6 を確実にシンク 2 の上方へ配設することができ、これにより導水部 6 からの排水を流し台天面部 1 にこぼすことなく、確実にシンク 2 内へ排水することができる構成として 50

いる。

【 0 0 3 6 】

また、本実施例では、前記導水部 6 が前記シンク 2 方向を向かずにトレー体 4 の外周縁より外方へ突出しない旋回領域内の所定位置で排水を阻止する排水阻止機構 7 を排水孔 5 と導水部 6 とに設けている。

【 0 0 3 7 】

具体的に説明すると、前記排水孔 5 は、図 5，図 6 に示すように、前記突出筒部 5 A を有底筒状とすると共に、図 4 に示すようにこの突出筒部 5 A 底面の偏心位置に通水孔部 8 A を貫通形成している。

【 0 0 3 8 】

また、導水部 6 は、図 5，図 6 に示すように、前記連結筒部 6 A 内の上下方向の中程に、突出筒部 5 A に連結筒部 6 A を連結した際に突出筒部 5 A の底面に面接する阻止面部 7 A を、この連結筒部 6 A の導水部 6 先端側の略半分を閉塞するようにして設け、この阻止面部 7 A で閉塞されない連結筒部 6 A 中程の間隙部 8 B は、阻止面部 7 A の下方に形成した空間部を介して導水部 6 の樋状部分と連通する構成としている。

【 0 0 3 9 】

そして、この導水部 6 を旋回させて阻止面部 7 A が突出筒部 5 A の底面に面接し、且つ前記通水孔部 8 A を閉塞した際には排水が阻止され、通水孔部 8 A が阻止面部 7 A のない位置まで旋回移動すると通水孔部 8 A と連結筒部 6 A とが連通して前記通水連通部 8 が形成され、この通水連通部 8 を介してトレー体 4 で受けた水が導水部 6 より排水される構成と

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【 0 0 4 0 】

更に詳しく説明すると、本実施例では、図 4 において、破線で示した位置に導水部 6 がある時に排水阻止機構 7 によって排水が阻止され、この位置以外の旋回領域では、前記排水部 6 から排水が行われるように構成している。即ち、図 4 において、二点鎖線で示したトレー体 4 の外周縁より導水部 6 を突出させた状態はもちろん、これ以外に一点鎖線で示したトレー体 4 の外周縁より導水部 6 が突出しない状態の位置でも導水部 6 から排水が行われる構成としている。

【 0 0 4 1 】

従って、導水部 6 がシンク 2 方向を向かずにトレー体 4 の外周縁より外方へ突出しない旋回領域における所定位置（図 4 の破線で示した位置）では通水孔部 8 A が阻止面部 7 A に閉塞されて排水阻止状態となり、この排水阻止位置から導水部 6 をシンク 2 方向となる最寄のトレー体 4 の外周の二縁に向けて旋回させると、阻止面部 7 A による通水孔部 8 A の閉塞状態が開放するように阻止面部 7 A が移動して排水阻止状態が解除する構成としている。

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【 0 0 4 2 】

尚、導水部 6 がシンク 2 方向を向かずにトレー体 4 の外周縁より外方へ突出しない旋回領域若しくはこのうちの所定領域では排水を阻止し、導水部 6 がシンク 2 方向を向いてトレー体 4 の外周縁より外方へ突出する旋回領域若しくはこのうちの所定領域では排水阻止状態を解除するように切り替わる排水阻止機構 7 を構成しても良く、このように構成した場合には、導水部 6 をシンク 2 に向けた時にだけ排水されることになるので、導水部 6 をシンク 2 に向けていない時に誤って水切り部材 3 上に洗浄した食器などを載置しても、トレー体 4 で受けた水が導水部 6 から流し台天面部 1 に流れ出てしまうような不都合が確実に防止されることになる。

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【 0 0 4 3 】

また、本実施例では、前記導水部 6 を前記排水阻止機構 7 による排水阻止状態で位置決める位置決め機構 1 1 を備えている。

【 0 0 4 4 】

具体的に説明すると、通水孔部 8 A の孔縁を下方へ若干突出させて突出筒部 4 A の底面に位置決め突部 1 1 A を形成すると共に、この位置決め突部 1 1 A が圧入係合する位置決め

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凹部 1 1 B を前記阻止面部 7 A の上面部に形成し、この位置決め突部 1 1 A と位置決め凹部 1 1 B とを圧入係合することで前記導水部 6 を排水阻止状態で位置決めすることができる構成としている。

【 0 0 4 5 】

本実施例では、この位置決め機構 1 1 による導水部 6 の位置決め状態が図 4 に破線で示した位置となるように構成している。

【 0 0 4 6 】

従って、この位置決め機構 1 1 により導水部 6 を位置決め状態としておくことで確実にトレイ体 4 内の水漏れを防ぐことができることになる構成としている。よって、不使用時にはこの位置決め排水阻止状態としておくことで、誤操作により水漏れすることもないし、
10 体裁も導水部 6 がトレイ体 4 の下に隠れて従来品と同等になる構成としている。

【 0 0 4 7 】

また、本実施例では、排水孔 5 を備えた前記トレイ体 4 と前記導水部 6 は樹脂製とし、前記排水阻止機構 7、前記通水連通部 8、前記凸条 9、前記凹条 1 0、前記位置決め機構 1 1 の各構成は、トレイ体 4 と導水部 6 とを樹脂成形するにあたって一体成形することで構成している。よって、前記各構成を有するトレイ体 4 と導水部 6 とは簡易に設計実現可能な構成であり、量産性に秀れ、安価に構成可能となる構成としている。

【 0 0 4 8 】

尚、本発明は、本実施例に限られるものではなく、各構成要件の具体的構成は適宜設計し得るものである。
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【 0 0 4 9 】

また、本実施例では、水切り部材 3 とトレイ体 4 とから成る水切り装置を示したが、市販の水切り柵や水切り籠などを水切り部材 3 として載置使用できる水切り部材受具（トレイ体 4）を単品で商品としても良い。

【 0 0 5 0 】

【発明の効果】

本発明は上述のように構成したから、導水部を旋回させて簡単に排水方向を変更できるし、導水部を予めシンクに向けておくことで、水切り部材上で水切りしてトレイ体で受けた水が自動的にシンクへと排出されるので、従来製品のように食器などの洗浄作業終了後にトレイ体内に溜まった水をシンクに流すような手間が不要となる非常に便利で実用性に秀れた画期的な水切り柵受け具となる。
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【 0 0 5 1 】

また、請求項 2 記載の発明においては、シンク脇にトレイ体を設置した際にこのトレイ体より外方へ突出する導水部を確実にシンク内の上方へ配設することができ、これにより導水部からの排水がシンク外へ流れることなく、確実にシンク内へ排水されることになる極めて実用性に秀れた構成の水切り部材受具となる。

【 0 0 5 2 】

また、請求項 3 記載の発明においては、排水阻止機構によって導水部をシンクに向けた時だけ排水されるので、導水部をシンクに向けていない時に誤って水切り部材上に洗浄した食器などを載置しても、トレイ体で受けた水が導水部から流し台天面部に流れ出てしまう
40 ような不都合がない極めて実用性に秀れた構成の水切り部材受具となる。

【 0 0 5 3 】

また、請求項 4 記載の発明においては、前記作用・効果を確実に発揮する排水阻止機構を簡易に設計実現可能となる一層実用性に秀れた構成の水切り部材受具となる。

【 0 0 5 4 】

また、請求項 5 記載の発明においては、前記作用・効果を確実に発揮する排水阻止機構を一層簡易構造により設計実現可能となり、一層実用的となる。

【 0 0 5 5 】

また、請求項 6 記載の発明においては、前記作用・効果を確実に発揮する極めて実用性に秀れた画期的な水切り部材付の水切り装置となる。
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【図面の簡単な説明】

【図 1】 本実施例の使用状態を示す説明斜視図である。

【図 2】 本実施例のトレー体を示す斜視図である。

【図 3】 本実施例のトレー体と導水部との部分拡大分解斜視図である。

【図 4】 本実施例の導水部の作動説明図である。

【図 5】 本実施例の排水阻止機構により排水阻止状態とした場合を示す部分拡大断面図である。

【図 6】 本実施例の排水可能状態を示す部分拡大断面図である。

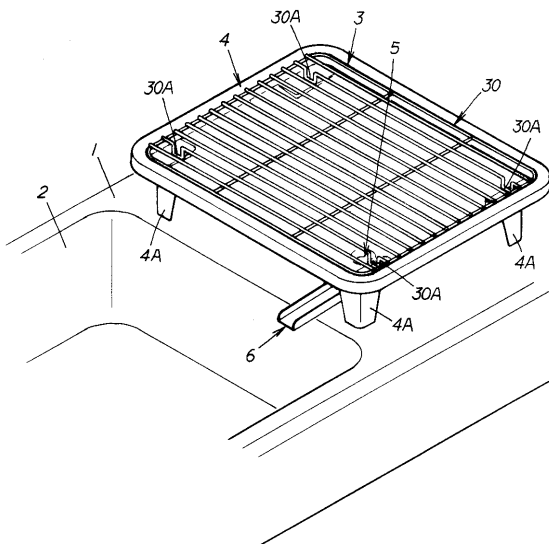
【図 7】 水切り部材の別例での使用状態を示す説明斜視図である。

【符号の説明】

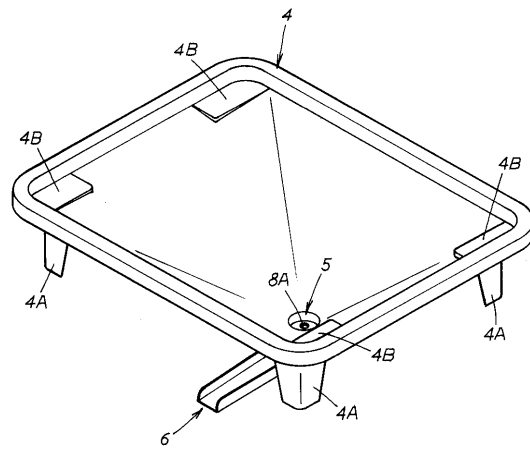
- 1 流し台天面部
- 2 シンク
- 3 水切り部材
- 4 トレー体
- 5 排水孔
- 6 導水部
- 7 排水阻止機構
- 8 通水連通部

10

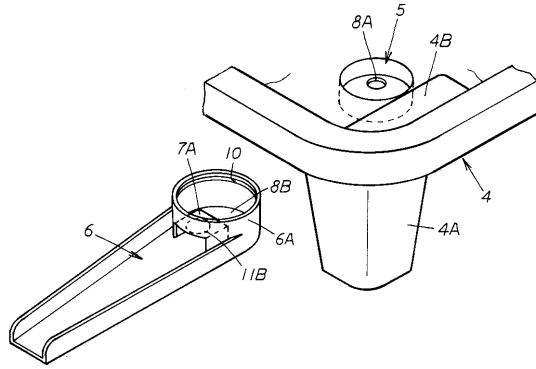
【図 1】



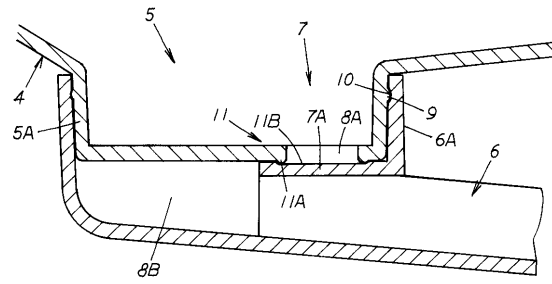
【図 2】



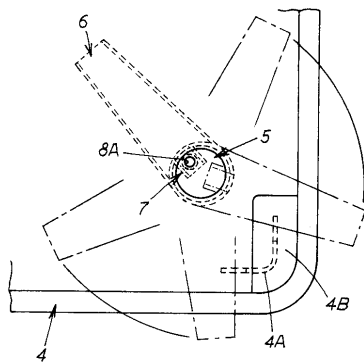
【図 3】



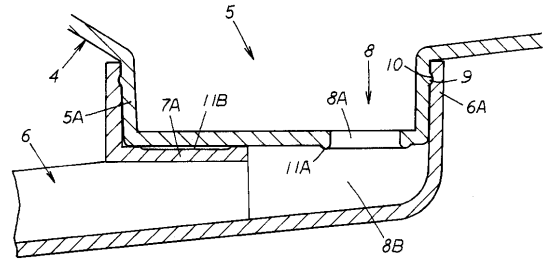
【図 5】



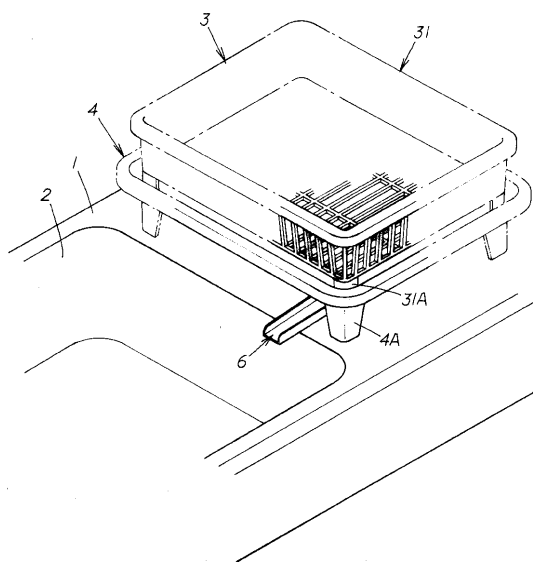
【図 4】



【図 6】



【図 7】

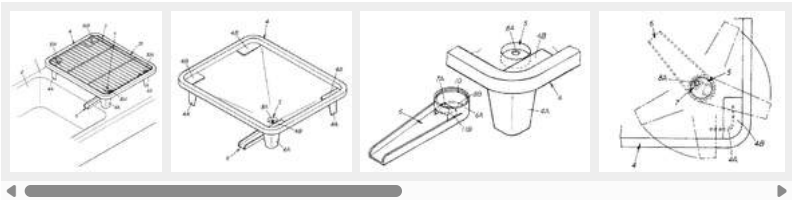


Draining member receiver and drainer

Abstract

<P>PROBLEM TO BE SOLVED: To provide a draining member receiver and a draining tool by which water charged inside a tray naturally drains away into a sink without water inside the tray being discharged into the sink after draining. <P>SOLUTION: The draining member receiver can be placed on a side of the sink 2 of a sink top face part 1. A drainage hole 5 is provided on the bottom of a tray body 4 on which a draining member 3 is placed and supported. Providing the drainage hole 5 with a drain conveying part 6 for regulating a drain direction can draw water charged inside the tray body 4 out through the drainage hole 5 and the drain conveying part 6. The drain conveying part 6 is turnably structured so that a drain direction can be changed. When the drain conveying part 6 is turned to the sink 2, in any case the drain from the drain conveying part 6 is drained away into the sink 2. <P>COPYRIGHT: (C)2004,JPO&NCIPI

Images (7)



Landscapes

Combinations Of Kitchen Furniture

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Claims (6)

A drain hole is provided at the bottom of the tray body which can be placed beside the sink on the top surface of the sink, and on which the draining member can be placed and supported, and a water guide portion for regulating the drainage direction is provided in the drain hole and received by the tray body. The water is configured to be able to be drained through a drain hole and a water guide, and the water guide is provided so as to be pivotable to change the drain direction, and at least when the water guide is directed to the sink. A drainer receiving member, wherein water drained from the water guide is drained into a sink. The said water guide part was comprised so that at least when this water guide part was directed toward the said sink toward the outside of the said tray body, it may be comprised so that it may protrude outside the outer periphery of a tray body. 2. The draining member receiver according to 1. A drainage prevention mechanism that switches between a drainage prevention state and a drainage state by turning the water conduction part is provided in one or both of the drainage hole and the water conduction part, and the water conduction part does not face the sink direction and the tray body does not face the sink. The draining member receiving device according to any one of claims 1 and 2, wherein drainage is prevented in a swivel region that does not protrude outward from the outer peripheral edge or in a predetermined region thereof. A water communication portion is provided between the drain hole and the water conveyance portion, and the water communication portion is provided in a swivel region or a swirl region where the water conveyance portion does not face the sink direction and does not protrude outward from the outer peripheral edge of the tray body. In the predetermined region, the drainage is blocked as a non-communication state, and a drainage prevention mechanism that enables drainage as a communication state when the water guiding portion turns so as to face the sink direction from the drainage prevention state is provided with the drainage hole and the water guiding portion. The draining member receiver according to any one of claims 1 to 3, wherein the water draining member receiver is provided on any one or both. The drainage hole is pivotally connected to the base of the water guiding portion, and the drainage hole and the base of the water guiding portion are provided with the water flowing communicating portion communicating with the turning position of the water guiding portion, and the water flowing communicating portion is The draining member receiving device according to claim 4, wherein the water guiding portion communicates when the water guiding portion turns and moves so as to face the sink direction. The draining member receiver according to any one of claims 1 to 5, and a draining member such as a draining shelf or a draining basket mounted on and supported by a tray of the draining member receiver. Drainer.

Description

[0001]
TECHNICAL FIELD OF THE INVENTION
TECHNICAL FIELD The present invention relates to a draining member receiver and a draining device that are installed and used beside a sink of a sink.
[0002]
Problems to be solved by the prior art and the invention

JP2004267285A

Japan

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Other languages: Japanese

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Current Assignee : Nirasawa Seihan KK

Worldwide applications

2003 · JP

Application JP2003058798A events ⓘ

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2023-03-05 · Anticipated expiration

Status · Expired - Lifetime

Info: Cited by (1), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

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2. Description of the Related Art Conventionally, for example, there is a draining device having a configuration in which a draining member such as a draining shelf or a draining basket is disposed in a tray for drainage.

[0003]

This drainer is placed on the side of the sink on the top of the sink, and the dishes washed in the sink are temporarily placed on the drainer. Then, after clearing the dishes and the like on the drainer, the water accumulated in the tray was used to flow to the sink.

[0004]

The present invention relates to an improvement of this kind of draining device, and it is very convenient that the water received in the tray body is automatically drained to the sink without the need for the work of flowing the water in the tray body to the sink after draining. A draining member receiver and a draining device are provided.

[0005]

[Means for Solving the Problems]

The gist of the present invention will be described with reference to the accompanying drawings.

[0006]

A drain hole 5 is provided at the bottom of a tray body 4 which can be placed beside the sink 2 on the sink top portion 1 and on which the draining member 3 can be placed and supported. The drain hole 5 is provided with a water guide 6 for regulating the drain direction. The water received by the tray body 4 is provided so as to be able to be drained through the drain hole 5 and the water guide portion 6, and the water guide portion 6 is provided so as to be pivotable to change the drain direction, At least when the water guide section 6 is directed to the sink 2, water drained from the water guide section 6 is configured to be drained into the sink 2 according to the draining member receiving device. .

[0007]

The water guide 6 is configured to protrude outward from the outer peripheral edge of the tray 4 when at least the water guide 6 is directed outward from the tray body 4 toward the sink 2. The draining member receiver according to claim 1, wherein:

[0008]

In addition, a drainage prevention mechanism 7 for switching between a drainage prevention state and a drainage state by turning the water guide section 6 is provided in one or both of the drain hole 5 and the water guide section 6, and the water guide section 6 is provided with the sink 2. 4. The drainage device according to claim 1, wherein a swirling region that does not project in a direction and does not protrude outward from the outer peripheral edge of the tray body or a predetermined region thereof is configured to prevent drainage. The present invention relates to the draining member receiver of the above.

[0009]

Further, a water communication portion 8 is provided between the drain hole 5 and the water introduction portion 6, and the water communication portion 8 is moved outward from the outer peripheral edge of the tray body 4 without the water introduction portion 6 facing the sink 2. In the swivel area that does not protrude in the direction or in a predetermined area of the swirl area, the drainage is blocked as a non-communication state, and when the water guide section 6 is turned so as to face the sink 2 from the drainage prevention state, the drainage state is enabled. The drainage member receiving device according to any one of claims 1 to 3, wherein a drainage prevention mechanism 7 is provided in one or both of the drain hole 5 and the water guide portion 6. .

[0010]

Further, the drainage hole 5 is connected to the base of the water guide part 6 so as to be pivotable, and the drainage hole 5 and the base of the water guide part 6 are provided with the water passage communication part 8 communicating with the water guide part 6 by the turning position of the water guide part 6. The draining member receiving device according to claim 4, wherein the water communicating portion 8 is configured to communicate when the water guiding portion 6 is turned so as to face the sink 2.

[0011]

The draining member receiver according to any one of claims 1 to 5, and a draining member 3 such as a draining shelf or a draining basket placed and supported on the tray body 4 of the draining member receiver. The present invention relates to a drainer characterized by the following.

[0012]

BEST MODE FOR CARRYING OUT THE INVENTION

Preferred embodiments of the present invention (how to implement the invention) will be briefly described with reference to the drawings, showing the operational effects thereof.

[0013]

The tray body 4 is placed on the side of the sink 2 on the sink top surface 1, and the draining member 3 is placed on the tray body 4.

[0014]

In addition, the water guide section 6 at the bottom of the tray body 4 is turned so that the drainage direction is directed to the sink 2.

[0015]

When tableware or the like washed in the sink 2 is placed on the drainer 3, water drops attached to the tableware or the like fall into the tray body 4 via the drainer 3, but the water received by the tray body 4 is The water is drained into the sink 2 through the drain hole 5 and the water guide 6 toward the sink 2 without being accumulated in the tray body 4.

[0016]

Therefore, by directing the water guiding section 6 to the sink 2 in advance, the water dropped in the tray body 4 is automatically discharged to the sink 2, so that after the tableware and the like which has been drained as in the conventional product is cleared, There is no trouble of flowing water accumulated in the tray body, which is very convenient, and the operation of directing the water guide 6 toward the sink 2 can be easily performed simply by turning the water guide 6.

[0017]

In addition, for example, the water guide 6 projects outward from the outer peripheral edge of the tray 4 when at least the water guide 6 is directed outward from the tray body 4 toward the sink 2. With this configuration, when the tray body 4 is installed beside the sink 2, the water guide portion 6 protruding outward from the tray body 4 can be reliably disposed above the inside of the sink 2. Is reliably drained into the sink 2 without spilling on the top surface 1 of the sink, which is more practical.

[0018]

Further, for example, a drainage prevention mechanism 7 for switching between a drainage prevention state and a drainage state by turning movement of the water guide section 6 is provided in one or both of the drain hole 5 and the water guide section 6, and the water guide section 6 is provided with the water guide section 6. If the swirl area or the predetermined area of the swirl area which does not project outward from the outer peripheral edge of the tray body 4 without facing the sink 2 is configured to prevent drainage, the water guide section 6 may be erroneously turned when the water guide section 6 is not turned to the sink 2. Even if the washed tableware or the like is placed on the draining shelf 3A, there is no inconvenience that the water received by the tray body 4 flows out from the water guide section 6 and flows out to the top surface section 1, making the apparatus more practical.

[0019]

Further, for example, a water communication part 8 is provided between the drain hole 5 and the water conduction part 6, and the water communication part 8 is connected to the outer peripheral edge of the tray body 4 without the water conduction part 6 facing the sink 2. A drainage preventing mechanism that prevents drainage in a turning area that does not protrude outward or in a predetermined area of the turning area so as to prevent drainage, and allows drainage to occur in a communicating state when the water guide section 6 is turned so as to face the sink 2. If the drainage holes 7 and / or the water guide portions 6 are provided, the drainage prevention mechanism 7 that reliably exerts the above-described functions and effects can be simply designed and realized, and becomes more practical.

[0020]

In addition, for example, the base of the water guide 6 is pivotably connected to the drain hole 5, and the water communication part 8 is connected to the drain 5 and the base of the water guide 6 by the turning position of the water guide 6. In addition, if the water communication part 8 is configured to communicate when the water guide part 6 turns and moves so as to face the sink 2, the drainage prevention mechanism 7 that reliably exerts the above-described operation and effect can be further simplified. The structure makes the design feasible and more practical.

[0021]

【Example】

A specific embodiment of the present invention will be described with reference to the drawings.

[0022]

The present embodiment relates to a draining device including a tray 4 for receiving water placed on the side of the sink top surface portion 1 and a draining member 3 placed and supported on the tray 4.

[0023]

More specifically, as shown in FIG. 1, the draining member 3 employs a substantially rectangular plate-shaped draining shelf 30 formed by assembling wires, and a rod (wire rod) located near four corners of the draining shelf 3A.) Is bent downward to form a leg 30 </ b> A to be placed on the inner bottom surface of the tray body 4.

[0024]

As shown in FIG. 2, the tray body 4 is formed in a generally rectangular shallow bottomed container having a size capable of storing and arranging the draining shelf 3 </ b> A, and legs 4 </ b> A are integrally suspended at four bottom corners. The legs 4 </ b> A are placed on the sink top surface 1 so that the bottom thereof floats at a predetermined height.

[0025]

A placement surface 4B is formed at four corners of the bottom surface inside (upper side) of the tray body 4, and the legs 30A of the draining shelf 30 and peripheral edges of the four corners are placed on the placement surface 4B. The draining shelf 30 is configured to be stably placed on the tray body 4.

[0026]

FIG. 7 shows a case where a drain basket 31 is adopted as another example of the drain member 3, and also in a case where the drain basket 31 is adopted, the legs 31A at the four bottom corners are mounted on the mounting surface 4B. By placing, the drain basket 31 can be stably placed on the tray body 4.

[0027]

In the present embodiment, a drain hole 5 is provided at the bottom of the tray body 4, a water guide 6 for regulating the drain direction is provided in the drain hole 5, and the water guide 6 is provided rotatably so that the drain direction can be changed. When at least the water guide 6 is directed to the sink 2, the water received by the tray body 4 can be drained into the sink 2 through the drain hole 5 and the water guide 6. .

[0028]

More specifically, the drainage hole 5 is formed by forming a round hole near the bottom corner of one of the four corners of the tray body 4. As shown in FIG. 2, the inner bottom surface of the tray body 4 is formed to be inclined toward the drain hole 5 so that water received on the inner bottom surface of the tray body 4 flows toward the drain hole 5. It is composed of.

[0029]

A projecting cylindrical portion 5A is formed along the edge of the drainage hole 5 and projects cylindrically below the outer bottom surface of the tray body 4.

[0030]

As shown in FIG. 3, the water guide section 6 is formed in a gutter-shaped body having a long U-shaped cross section, and has a cylindrical connecting tube section 6A fitted and connected to the protruding tube section 5A at a base end portion. It protrudes upward.

[0031]

The connecting structure between the drainage hole 5 and the water guiding portion 6 includes a projecting ridge 9 having a length horizontally extending in the circumferential direction of the projecting tube portion 5A on the outer peripheral surface of the projecting tube portion 5A. On the inner peripheral surface of the portion 6A, a concave ridge 10 having a length horizontally in the circumferential direction of the connecting cylindrical portion 6A is recessed, and the connecting cylindrical portion 6A is fitted on the protruding cylindrical portion 5A, and By press-fitting engagement with the concave ridge 10, the connecting cylindrical portion 6A is prevented from coming off with respect to the protruding cylindrical portion 5A, and the water guide portion 6 is guided by the engaging ridge 9 and the concave ridge 10 as guides. Are connected so as to be able to turn 360 degrees in the horizontal direction.

[0032]

That is, in the present embodiment, the water guide portion 6 is provided so as to be freely rotatable in a floating space between the sink top surface portion 1 and the bottom surface of the tray body 4 generated by the leg portion 4A. The predetermined floating height of the bottom of the tray body 4 with respect to the sink top surface portion 4 by 4A is set to a height at which the water guide portion 6 can pivot without contacting the sink top surface portion 1.

[0033]

In the present embodiment, when the water guide 6 is directed outward from the tray body 4 toward the sink 2, the water guide 6 projects outward from the outer peripheral edge of the tray body 4. It is configured as follows.

[0034]

More specifically, as shown in FIG. 4, when the water guide section 6 is directed outward with respect to two edges of the outer periphery of the tray body 4 near the corner where the drain hole 5 is formed, The length of the water guiding section 6 is set and configured so that the tip of the section 6 protrudes outside the tray body 4 beyond the two outer edges.

[0035]

Therefore, as shown in FIG. 1, when the tray body 4 is installed so that the two edges of the outer periphery are provided on the side of the sink 2 and the water guide section 6 is directed to the sink 2, the outside of the tray body 4 The water guide 6 protruding in the direction can be reliably disposed above the sink 2, whereby drainage from the water guide 6 can be surely drained into the sink 2 without spilling on the top surface 1 of the sink. It has a configuration that can be used.

[0036]

Further, in this embodiment, a drainage blocking mechanism 7 for blocking drainage at a predetermined position in a swirl region where the water guide portion 6 does not face the sink 2 and does not protrude outward from the outer peripheral edge of the tray body 4 is provided. 5 and the water guide 6.

[0037]

More specifically, as shown in FIGS. 5 and 6, the drainage hole 5 has the protruding cylindrical portion 5A having a bottomed cylindrical shape, and the eccentricity of the bottom surface of the protruding cylindrical portion 5A as shown in FIG. A water passage hole 8A is formed at the position.

[0038]

As shown in FIG. 5 and FIG. 6, the water guide section 6 is provided at the middle of the connecting cylinder section 6A in the vertical direction when the connecting cylinder section 6A is connected to the projecting cylinder section 5A. A blocking surface portion 7A that is in contact with the bottom surface is provided so as to close substantially half of the connecting tube portion 6A on the distal end side of the water guide portion 6, and a gap 8B in the middle of the connecting tube portion 6A that is not closed by the blocking surface portion 7A is It is configured to communicate with the gutter-shaped portion of the water guide section 6 through a space formed below the blocking surface section 7A.

[0039]

When the water guide portion 6 is turned, the blocking surface portion 7A comes into contact with the bottom surface of the protruding cylindrical portion 5A, and when the water flow hole portion 8A is closed, drainage is prevented, and the water flow hole portion 8A is blocked. When the pivoting movement is performed to a position

where there is no 7A, the water passage hole 8A and the connection cylinder 6A communicate with each other to form the water passage communication portion 8, and the water received by the tray body 4 through the water passage communication portion 8 is formed. It is configured to be drained from the water guide section 6.

[0040]

More specifically, in this embodiment, drainage is prevented by the drainage prevention mechanism 7 when the water guide portion 6 is located at the position shown by the broken line in FIG. 1. Is configured to be performed. That is, in FIG. 4, the water guide portion 6 protrudes from the outer peripheral edge of the tray body 4 shown by the one-dot chain line as well as the state where the water guide portion 6 protrudes from the outer peripheral edge of the tray body 4 shown by the two-dot chain line. The drainage section 6 is configured to drain the water even in a position where no water is discharged.

[0041]

Therefore, at a predetermined position (the position shown by the broken line in FIG. 4) in the swirl region where the water guide section 6 does not face the sink 2 and does not protrude outward from the outer peripheral edge of the tray body 4, the water passage hole section 8A becomes the blocking surface section 7A. When the water guide section 6 is turned from the drain stop position toward the two edges of the outer periphery of the nearest tray body 4 in the direction of the sink 2, the water flow hole 8A formed by the blocking surface section 7A is formed. The blocking surface portion 7A moves so that the closed state of the drainage is opened, and the drainage prevention state is released.

[0042]

In the swirl area where the water guide section 6 does not face the sink 2 and does not protrude outward from the outer peripheral edge of the tray body 4 or in a predetermined area thereof, drainage is prevented. A drainage blocking mechanism 7 that switches so as to release the drainage blocking state may be configured in a swivel area that projects outward from the outer peripheral edge of the body 4 or in a predetermined area of the swirl area. Since the water is drained only when the part 6 is directed to the sink 2, even if the washed tableware is erroneously placed on the draining member 3 when the water guiding part 6 is not directed to the sink 2, the tray body 4 Inconveniences such as that the water received in step (1) flows out of the water guide section 6 and flows out to the tabletop 1 can be reliably prevented.

[0043]

Further, in this embodiment, there is provided a positioning mechanism 11 for positioning the water guide section 6 in a state where the drainage blocking mechanism 7 prevents drainage.

[0044]

More specifically, the hole of the water passage hole 8A is slightly protruded downward to form a positioning protrusion 11A on the bottom surface of the protruding cylindrical portion 4A, and the positioning protrusion 11B into which the positioning protrusion 11A press-fits. Is formed on the upper surface of the blocking surface portion 7A, and the water guiding portion 6 can be positioned in a drainage preventing state by press-fitting the positioning protrusion 11A and the positioning recess 11B.

[0045]

In the present embodiment, the water guiding section 6 is positioned by the positioning mechanism 11 at the position shown by the broken line in FIG.

[0046]

Therefore, by setting the water guide portion 6 in the positioning state by the positioning mechanism 11, it is possible to reliably prevent water leakage in the tray body 4. Therefore, by setting the positioning drainage prevention state when not in use, there is no water leakage due to an erroneous operation, and the appearance is such that the water guide portion 6 is hidden under the tray body 4 and is equivalent to a conventional product.

[0047]

Further, in the present embodiment, the tray body 4 having the drainage hole 5 and the water guide portion 6 are made of resin, and the drainage prevention mechanism 7, the water passage communication portion 8, the convex line 9, the concave line 10, Each of the components of the positioning mechanism 11 is formed by integrally molding the tray body 4 and the water guide section 6 with resin. Therefore, the tray body 4 and the water guide section 6 having the above-described respective configurations are configurations that can be easily designed and realized, and have a configuration that excels in mass productivity and can be configured at low cost.

[0048]

It should be noted that the present invention is not limited to the present embodiment, and a specific configuration of each component can be appropriately designed.

[0049]

Further, in this embodiment, the draining device including the draining member 3 and the tray body 4 is shown. However, a draining member receiver (tray body 4) that can use a commercially available draining shelf, a draining basket, or the like as the draining member 3 can be used. May be sold separately.

[0050]

【The invention's effect】

Since the present invention is configured as described above, it is possible to easily change the drainage direction by turning the water guide section, and by directing the water guide section to the sink in advance, the drain section is drained on the drain member and received by the tray body. Water is automatically drained to the sink, eliminating the need to drain the water that has accumulated in the tray after the washing of tableware, etc., as in conventional products, making it extremely convenient and practical. It becomes an innovative breakthrough shelf catcher.

[0051]

According to the second aspect of the present invention, when the tray body is installed beside the sink, the water guide portion protruding outward from the tray body can be reliably disposed above the inside of the sink. The drainage member receiving device has an extremely practical configuration that ensures that the drainage from the section does not flow out of the sink but drains into the sink.

[0052]

According to the third aspect of the present invention, since the water is drained only when the water guide portion is directed to the sink by the drainage prevention mechanism, the dishwasher or the like that has been washed on the drain member by mistake when the water guide portion is not directed to the sink is placed. Even if it is placed, the water draining member receiver has a configuration extremely excellent in practical use, which has no inconvenience such that the water received by the tray body flows out of the water guide portion and flows out to the top surface portion.

[0053]

Further, in the invention according to the fourth aspect, a drainer receiving device having a configuration that is more practical and makes it possible to easily design and realize a drainage prevention mechanism that reliably exerts the above-described functions and effects.

[0054]

Further, in the invention according to claim 5, the drainage prevention mechanism that reliably exerts the above-mentioned functions and effects can be designed and realized with a simpler structure, and becomes more practical.

[0055]

Further, in the invention according to claim 6, there is provided an extremely practical and innovative water draining device with a water draining member, which reliably exerts the above-mentioned functions and effects.

[Brief description of the drawings]

FIG. 1 is an explanatory perspective view showing a use state of the present embodiment.

FIG. 2 is a perspective view showing a tray body of the present embodiment.

FIG. 3 is a partially enlarged exploded perspective view of a tray body and a water guide according to the present embodiment.

FIG. 4 is an explanatory view of the operation of the water guide section of the present embodiment.

FIG. 5 is a partially enlarged cross-sectional view showing a case where a drainage blocking state is set by the drainage blocking mechanism of the present embodiment.

FIG. 6 is a partially enlarged cross-sectional view showing a drainable state of the present embodiment.
FIG. 7 is an explanatory perspective view showing a use state of another example of the drainer.

[Explanation of symbols]

DESCRIPTION OF SYMBOLS 1 Top surface part of sink 2 Sink 3 Drain member 4 Tray body 5 Drain hole 6 Water guide part 7 Drainage prevention mechanism 8 Water communication part

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Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
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JP2003058798A	2003-03-05	2003-03-05	Draining member receiver and draining device
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Application	Filing date	Title
JP2003058798A	2003-03-05	Draining member receiver and draining device

Legal Events

Date	Code	Title	Description
2005-04-28	A521	Request for written amendment filed	Free format text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20050427
2006-02-01	A621	Written request for application examination	Free format text: JAPANESE INTERMEDIATE CODE: A621 Effective date: 20060131
2007-07-31	A977	Report on retrieval	Free format text: JAPANESE INTERMEDIATE CODE: A971007 Effective date: 20070731
2008-10-31	A131	Notification of reasons for refusal	Free format text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20081030
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2009-01-30	A01	Written decision to grant a patent or to grant a registration (utility model)	Free format text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20090129
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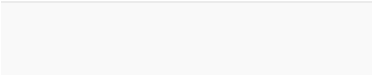
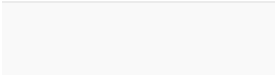


EXHIBIT K



(12) **United States Patent**
Sullivan et al.

(10) **Patent No.:** **US 7,407,059 B2**
(45) **Date of Patent:** **Aug. 5, 2008**

(54) **DRYING STORAGE RACK**

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patent is extended or adjusted under 35
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(65) **Prior Publication Data**

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(51) **Int. Cl.**
A47G 19/08 (2006.01)

(52) **U.S. Cl.** **211/41.03**; 32/3; 220/572

(58) **Field of Classification Search** 211/41.2-41.8,
211/126.9, 133.5, 133.6, 181.1; D32/3, 55-59;
220/487-488, 572

See application file for complete search history.

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Primary Examiner—Brian E. Glessner

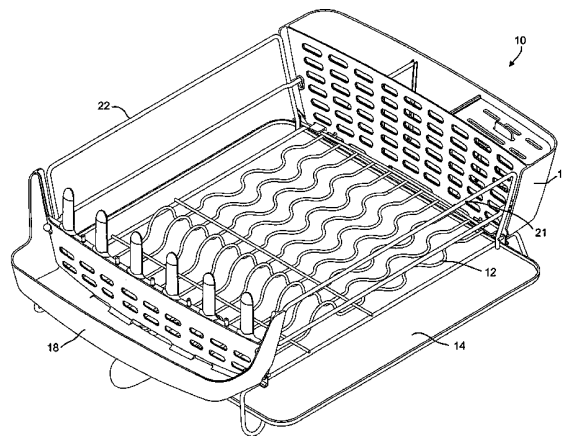
Assistant Examiner—Candace L. Bradford

(74) *Attorney, Agent, or Firm*—Seyfarth Shaw LLP

(57) **ABSTRACT**

A storage rack for retaining items to be dried, which can be used in conjunction with a drain basin, such as a sink, or as a stand alone system is disclosed. The rack includes a support body having a bottom surface, a plurality of side surfaces, and a plurality of foot members extending from the body in a direction opposite the side surfaces. The rack also includes three detachable basins: two side basins and a lower drain basin. The lower basin includes a flexible spout extending beyond an edge, the spout being capable of movement between a downward position extending below the surface of the basin and an upward position extending the spout above the surface of the basin.

15 Claims, 8 Drawing Sheets



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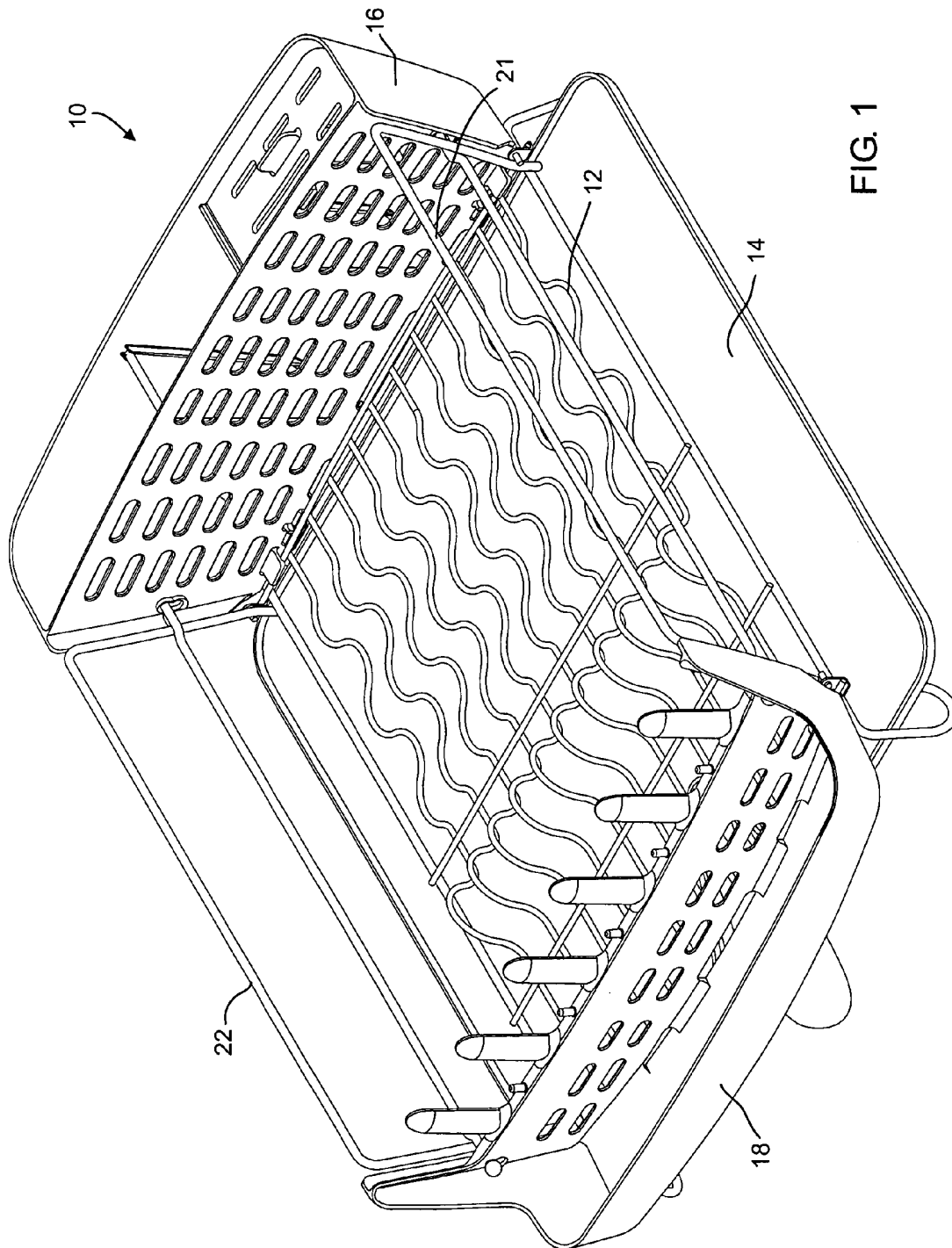
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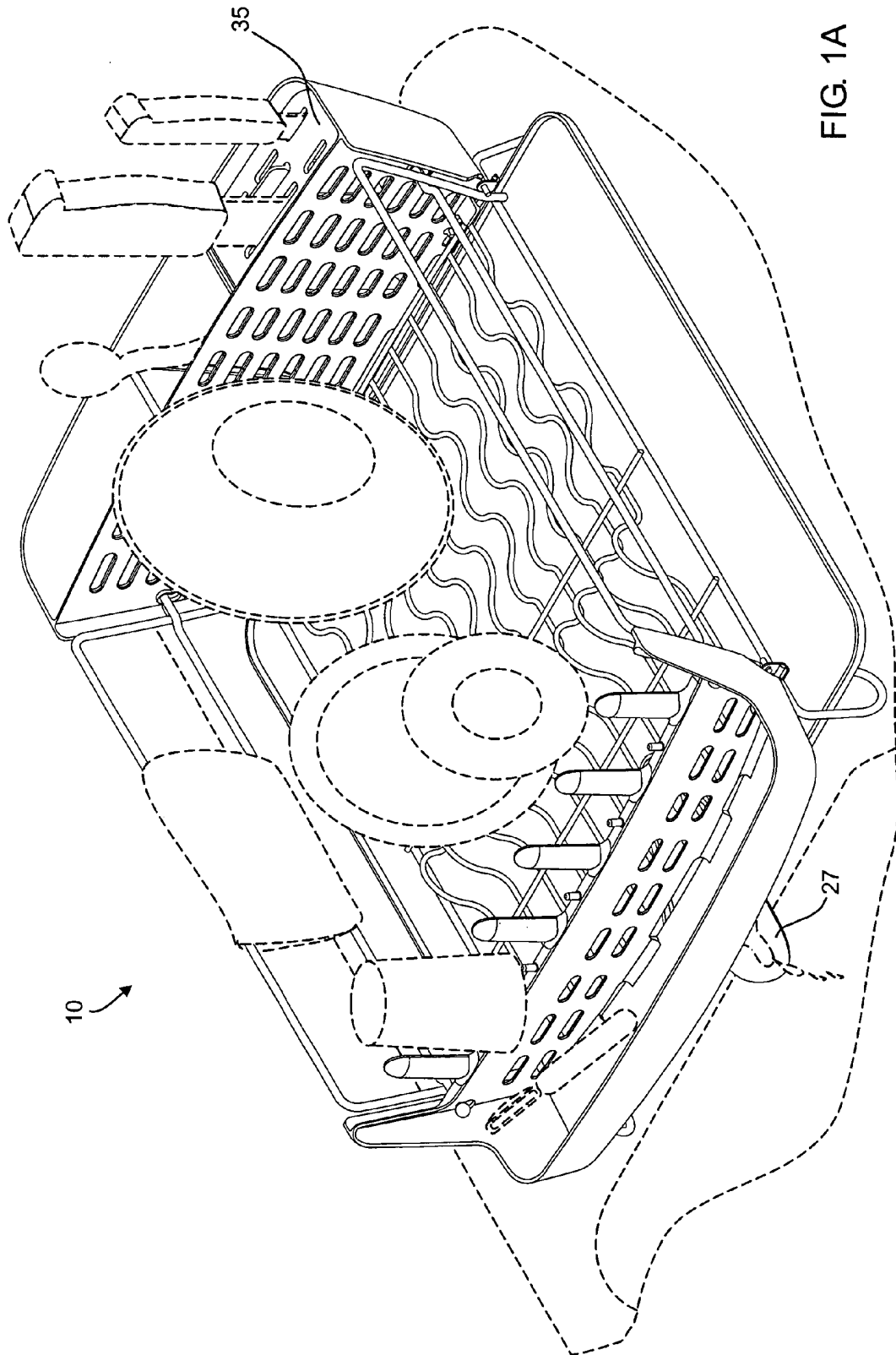


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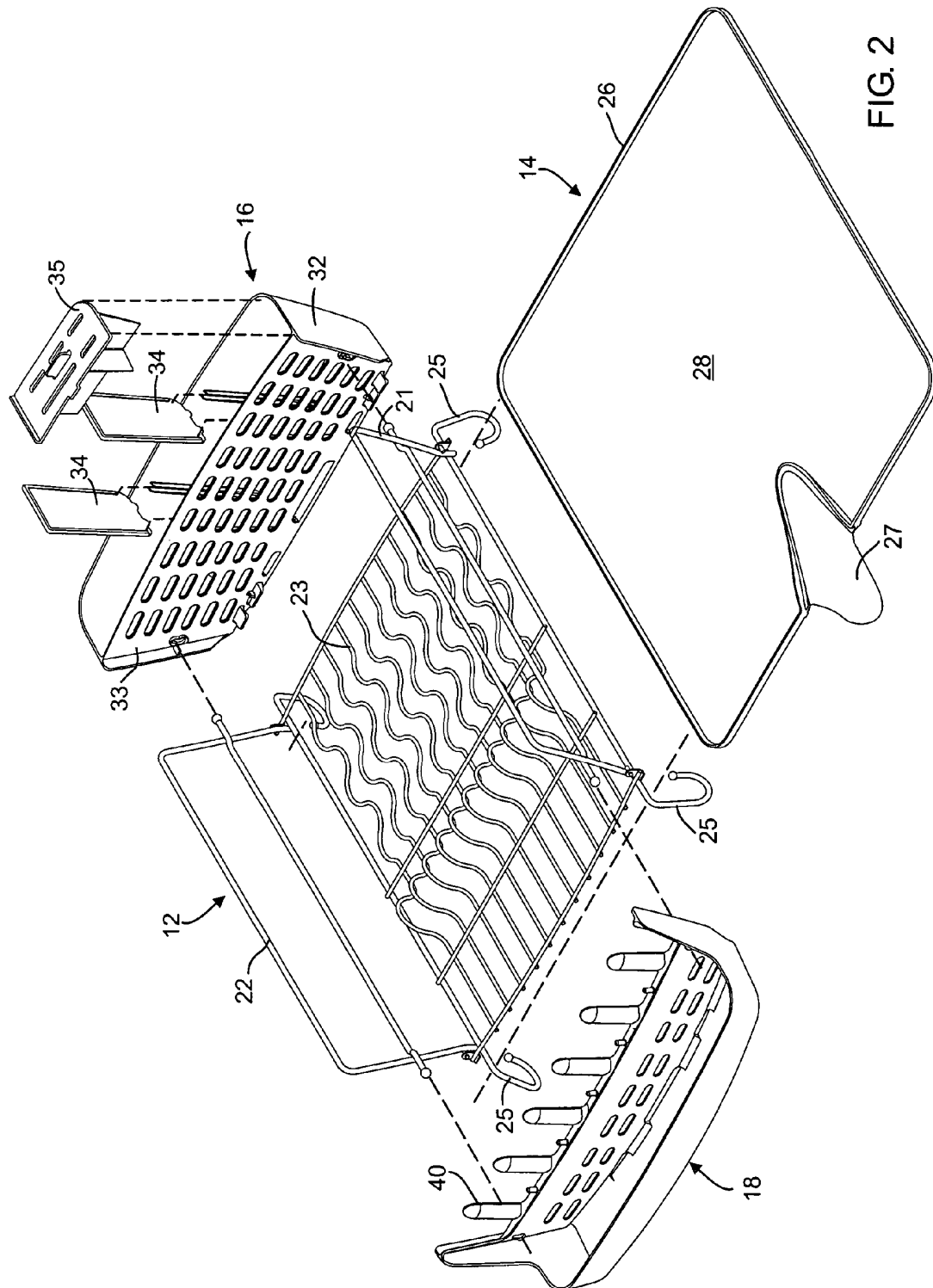


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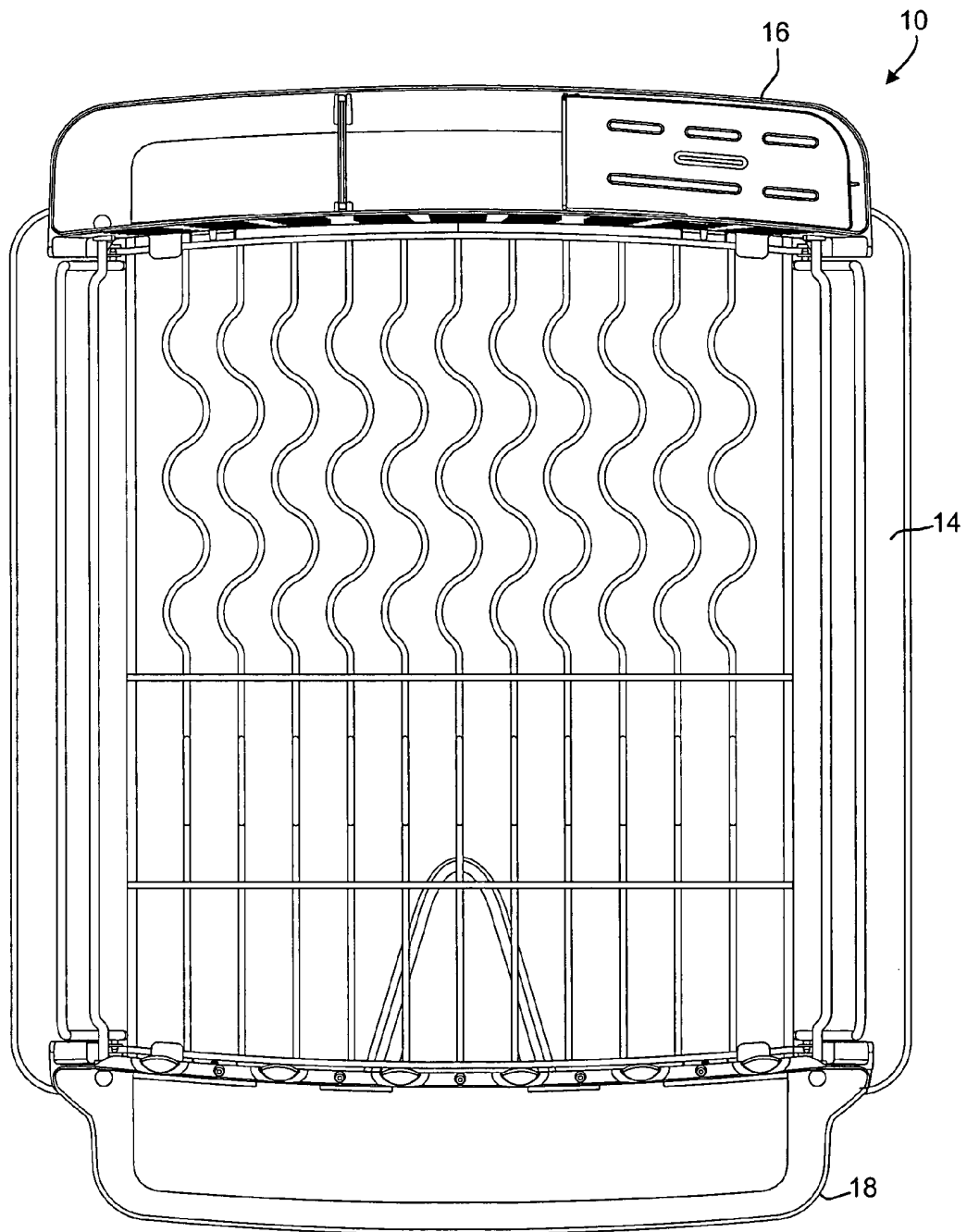


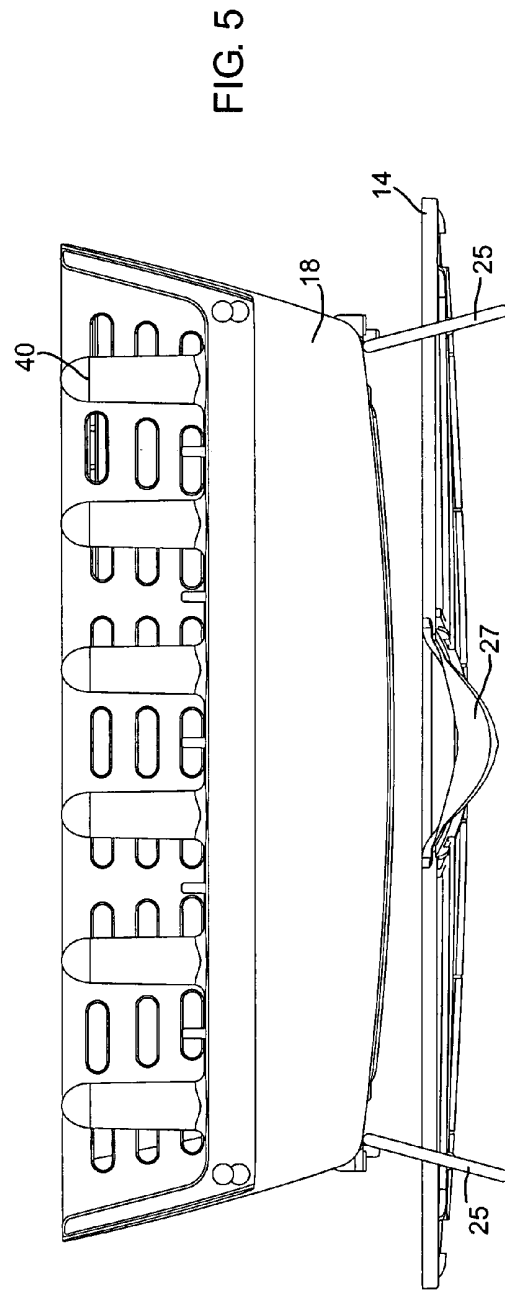
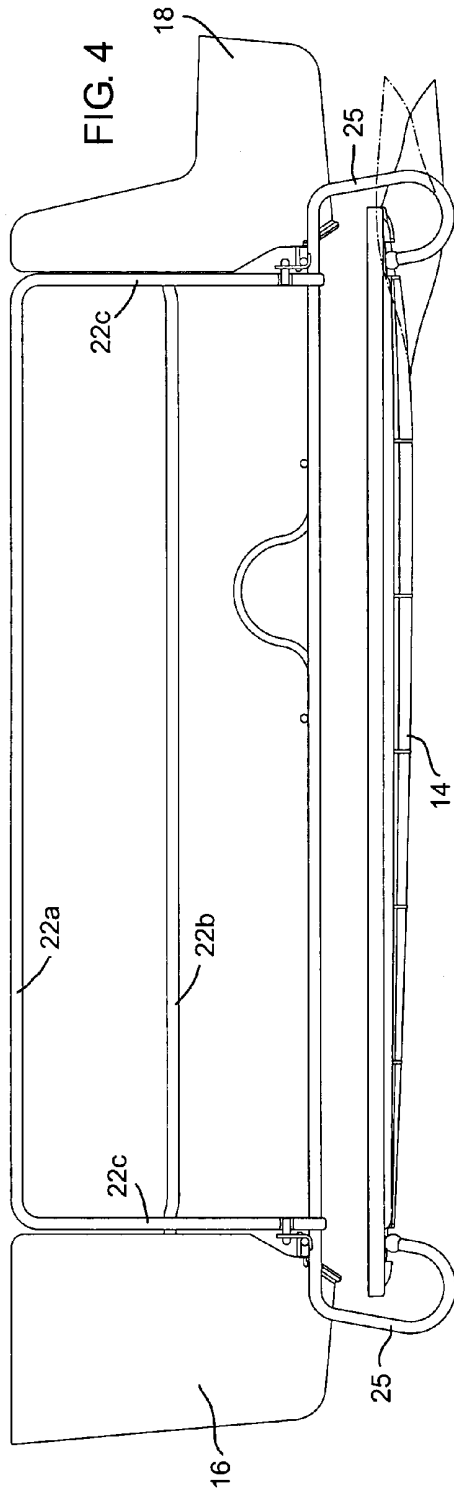
FIG. 3

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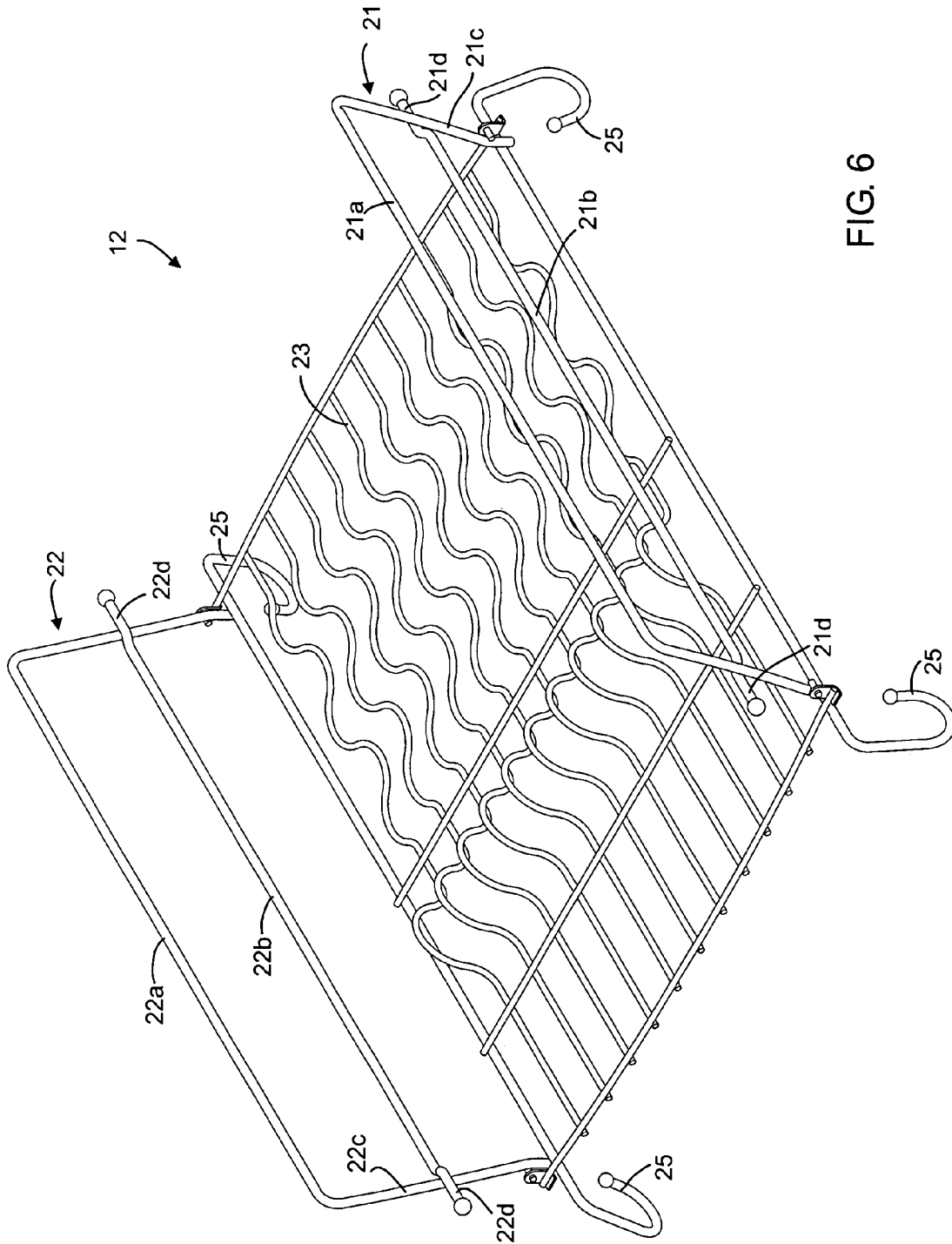


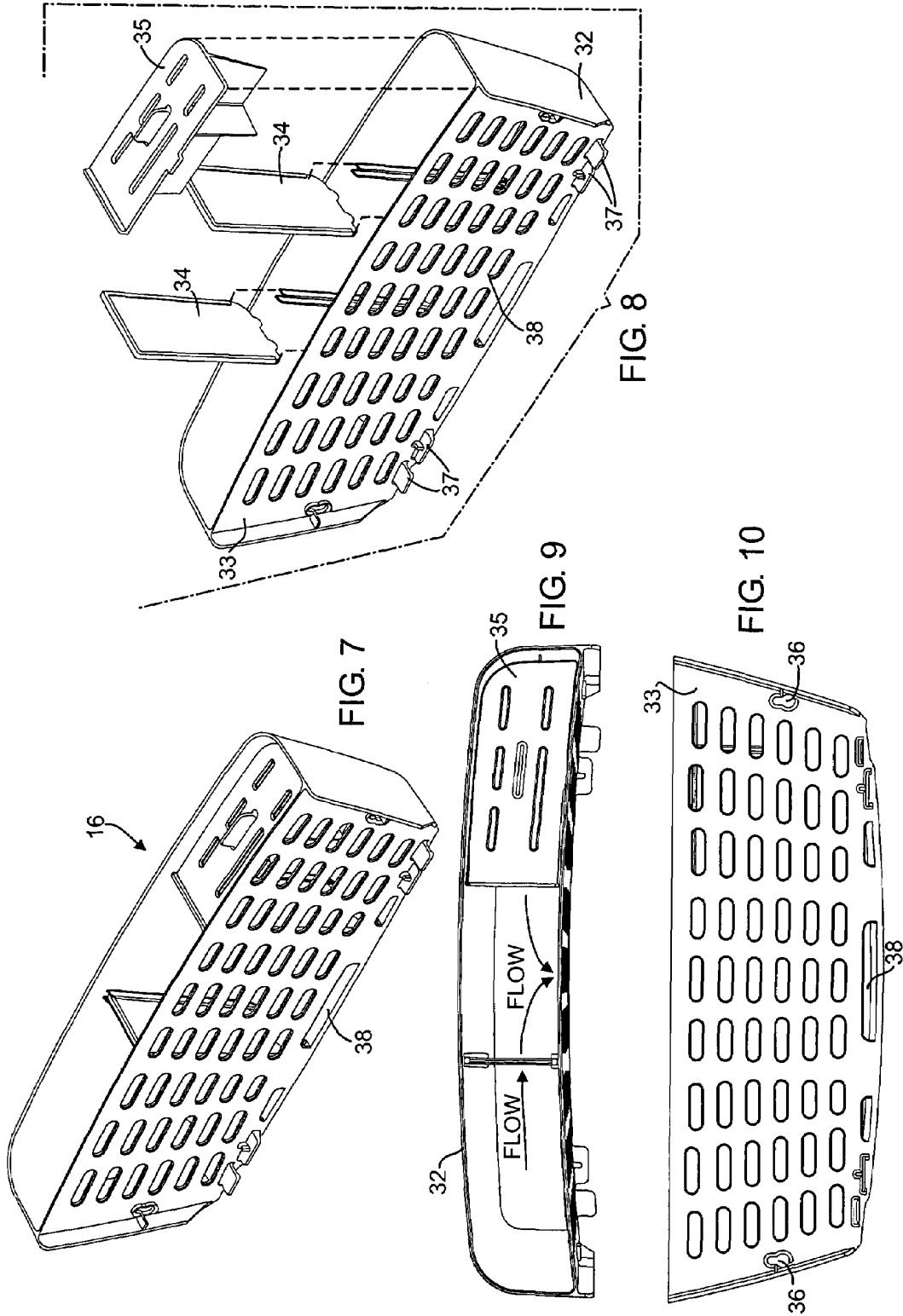
FIG. 6

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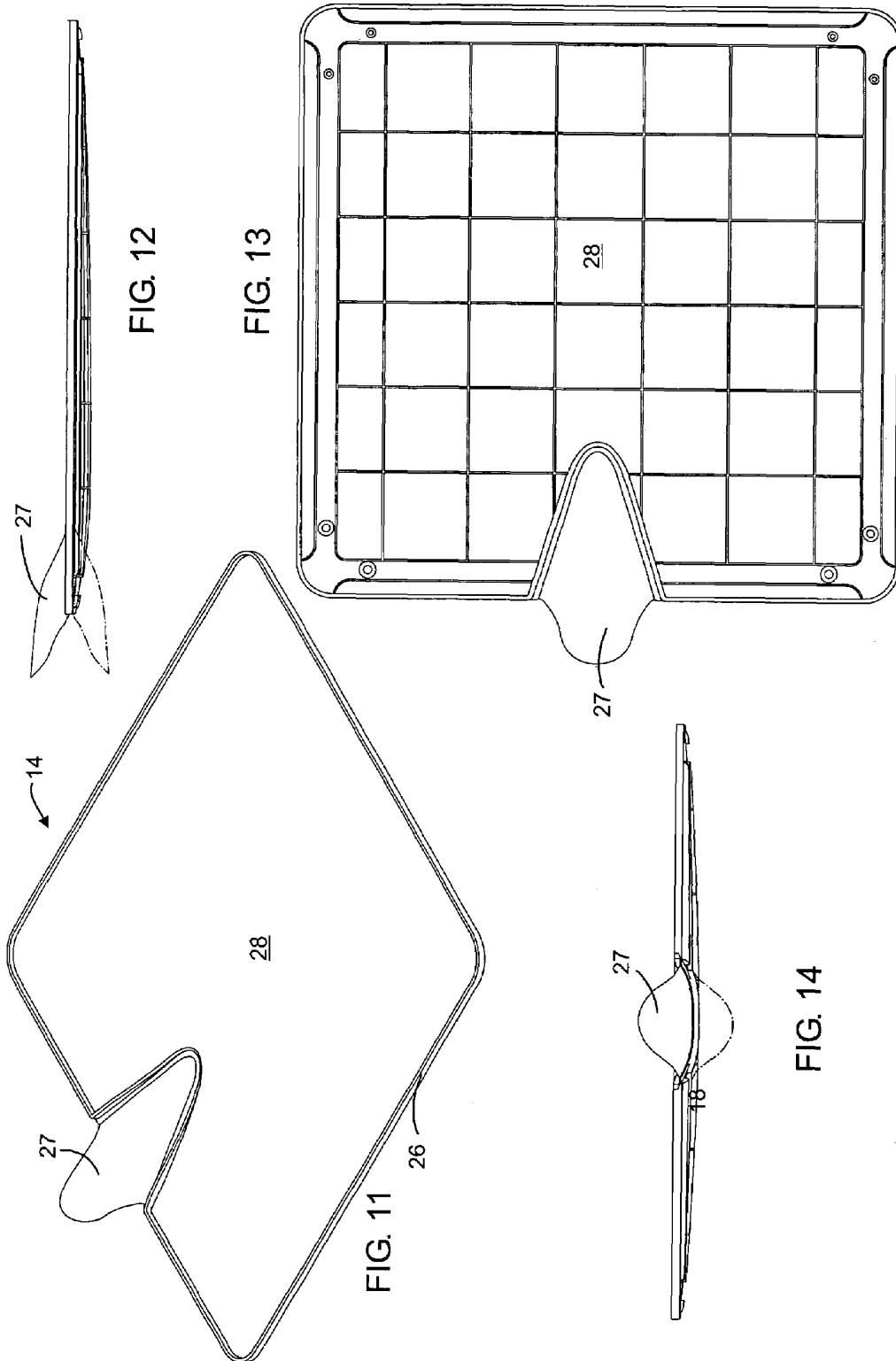


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DRYING STORAGE RACK

TECHNICAL FIELD

The present invention relates to a rack for storing utensils, such as, for example, plates, bowls, pots, pans, flatware, and the like, for drying. More specifically, the present invention relates to a drying rack having multiple detachable basins for storing such utensils.

BACKGROUND OF THE INVENTION

As long as there has been kitchens, there has been dirty dishes. As long as there has been dirty dishes, there has been a need to wash and dry such dishes. There are basically two widely accepted methods for accomplishing this least favorite task of most every person—i.e., washing and drying by hand or by use of an automatic dishwasher. For those still employing the former method, hand drying has typically been considered inferior to air drying. However, air drying requires the wet dishes to be exposed to the air for some time to allow water to be drained or evaporated.

Countless attempts have been made to provide a device which meets the many structural requirements as well as aesthetic desires for a drying rack, commonly referred to as a dish rack. Such requirements include the ability to accommodate various plate, bowl and glassware sizes, the ability to store a significant amount of dishes, including flatware, for drying, the ability to prevent messy water drainage onto counters, and the ability to provide easy compact storage when not in use while still being readily constructed when needed.

However, until the present device, none have addressed each of these problems with a single drying rack. The shortcomings of prior devices may be due to a perception that a larger dish rack would be too bulky or flimsy if it were made to be foldable. Or, perhaps it is a failure to recognize the failings of any particular device. Nonetheless, the present invention is unique in that it addresses each of these, as well as other problems found in the prior art. By providing a drying storage rack which is sturdy, capable of accommodating a variety of items, suitable for use as a stand alone rack as well as for use with a drain sink, and foldable for storage purposes, the present invention solves these problems.

SUMMARY OF THE INVENTION

There is disclosed herein an improved drying storage rack which avoids the disadvantages of prior racks while affording additional structural and operating advantages.

In an embodiment there is provided a drying rack comprising a support body, a first detachable basin, a second detachable basin, and a third detachable basin. The support body includes a bottom surface, a plurality of side surfaces attached substantially perpendicular to and along an edge of the bottom surface, and a plurality of foot members extending from the body in a direction opposite the side surfaces. The first detachable basin includes a substantially planar surface defined by a peripheral raised edge, and a flexible spout extending beyond an edge, the spout being capable of movement between a downward position extending below the planar surface of the basin and an upward position extending above the planar surface of the basin, wherein the basin is maintained in an elevated position by the foot members of the support body parallel to the bottom surface with the spout oriented below a side surface. The second detachable basin is preferably configured to be affixed to the support body and

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extend between two side surfaces, while the third detachable basin is also configured to be affixed to the support body and extend between two side surfaces.

It is an object of the present invention to provide an improved drying rack for storing a plurality of items for drying.

It is, therefore, another object of the invention to provide a drying rack with a bottom surface of the support body having three distinct zones created by a plurality of curved planar members defining a first zone, a plurality of raised members defining a second zone, and a plurality of straight planar members defining a third zone.

It is an object of one embodiment of the invention to provide a drying rack having side surfaces hinged to an edge of the bottom surface and capable of being folded when the detachable basins are removed.

A utensil comprising a handle portion composed of a rigid material, a blade portion connected to the handle portion having first and second surfaces and composed of a first flexible material, and a second flexible material adhered to at least one of either the first and second opposing surfaces of the blade portion is disclosed.

These and other objects of the invention will become apparent from the detailed description below and the appended drawing figures.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an embodiment of the drying storage rack of the present invention;

FIG. 1A is a perspective view of the drying storage rack of FIG. 1 in use;

FIG. 2 is an exploded view of the drying storage rack illustrated in FIG. 1;

FIG. 3 is a top view of the drying storage rack illustrated in FIG. 1;

FIG. 4 is an elevated side view of the drying storage rack illustrated in FIG. 1;

FIG. 5 is an elevated front view of the drying storage rack illustrated in FIG. 1;

FIG. 6 is perspective view of an embodiment of the support body of the drying storage rack illustrated in FIG. 1;

FIG. 7 is a perspective view of an embodiment of one of the detachable basins of the present drying storage rack;

FIG. 8 is an exploded view of the detachable basin shown in FIG. 7;

FIG. 9 is a top view of the detachable basin shown in FIG. 7;

FIG. 10 is a side view of the detachable basin shown in FIG. 7;

FIG. 11 is a perspective view of an embodiment of another of the detachable basins of the present invention;

FIG. 12 is an elevated side view of the detachable basin illustrated in FIG. 11;

FIG. 13 is a bottom view of the detachable basin illustrated in FIG. 11; and

FIG. 14 is a front view of the detachable basin illustrated in FIG. 11 showing an embodiment of the flexible spout in an upward position and a downward position (broken lines).

DETAILED DESCRIPTION OF THE INVENTION

While the invention is susceptible of embodiment in many different forms, this disclosure will describe in detail preferred embodiments of the invention with the understanding that the present disclosure is to be considered as an exempli-

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fication of the principles of the invention and is not intended to limit the broad aspect of the invention to the embodiments illustrated.

Referring to the appended FIGS. 1-14, the following discussion references component 10 as a drying storage rack or merely as rack 10. In the illustrated embodiment, the drying storage rack 10 includes a support body 12, a first detachable basin 14, a second detachable basin 16, and a third detachable basin 18.

The support body 12, with particular reference to FIGS. 1, 2 and 6, is constructed substantially of a coated wire frame in the present embodiment. The body 12 includes two foldable side surfaces 21, 22, connected by at least one hinge member, and preferably two hinge members each, to opposite edges of a bottom surface 23, and two open basin areas 24 adjacent each side surface. In an alternative embodiment, the two foldable side surfaces may be adjacent each other relative to the bottom surface 23. The support body 12 also includes a plurality of foot members 25, preferably four foot members, extending from the bottom surface 23 in a hook configuration. As discussed further below, the foot members 25, while supporting body 12, also serve to support the first detachable basin 14 in an elevated position (see FIG. 4).

The side surfaces 21, 22 can be of any configuration suitable for providing structural support to retain the detachable basins on the support body 12 and support for any drying items which may lean against the side surfaces. In the embodiment shown in FIG. 6, the side surfaces 21, 22 are each comprised, respectively, of a top rail 21a, 22a, a mid-rail 21b, 22b and two side rails 21c, 22c, which are curved extensions of the top rail 21a, 22a. Each mid-rail 21b, 22b includes a connecting member 21d, 22d extending from each end, as detailed in FIG. 6. The connecting members 21d, 22d include enlarged ends used for connecting the side surfaces 21, 22 to the adjacent basins 16 and 18, as discussed further below.

The side surfaces 21, 22 are designed to fold inward to lay across the bottom surface 23 when not in use. Accordingly, as illustrated in FIG. 6, each side surface 21, 22 is affixed to the bottom surface by two hinge components 39 attached proximate the end of each side rail 21c, 22c. The ends of each side rail 21c, 22c, are designed to form a stop biasing against the edge of the bottom surface 23 when the side surfaces 21, 22 are upright.

Referring now to FIGS. 2, 4, 5 and 11-14, the first detachable basin 14 can be more readily understood. The basin 14 is defined by a peripheral edge 26 about a planar surface 28. The edge 26 is preferably raised from the planar surface 28 a distance which is tall enough to provide a barrier against fluid running off the planar surface 28 at any point. A small portion of the edge 26 is not raised to accommodate a flexible spout 27 positioned to extend from the planar surface 28 beyond the basin edge 26. In an upward position, depicted by solid line of FIGS. 12 and 14, the spout 27, in combination with the peripheral edge 26, is capable of holding a quantity of fluid on the planar surface 28 of the basin 14. In a downward position, depicted by broken line of FIGS. 12 and 14, fluid is readily drained from basin 14 (see FIG. 1A). The basin 14 is preferably square to allow it to be positioned a number of ways below the bottom surface 23 of the support body 12. This allows the drying storage rack 10 to be positioned in a more convenient manner while still allowing the flexible spout 27 to be more easily aligned with a drain basin, when desired. Certainly, the basin may be made in a number of different geometric shapes, if desired.

Referring now to FIGS. 2, 4 and 7-10, the second detachable basin 16 is illustrated. The second basin 16 is preferably comprised of a compartment defined by a first wall segment

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32 being curved at each end to connect to a second wall segment 33. The second wall segment includes a plurality of openings to allow a drying air flow to assist the drying process. The basin compartment preferably comprises at least one slidably removable panel, and preferably two removable panels 34, which connect to each of the first and second wall segments 32, 33. The removable panels 34 divide the compartment into sub-compartments, preferably three, to maintain items separate where desired.

At least one sub-compartment panel 35 may be used with the basin 16, as shown in FIG. 8. The sub-compartment panel 35 is configured to cover an upper opening of a sub-compartment and includes a plurality of slotted openings therein to accommodate articles to be held in a vertical position for drying (see FIG. 1A).

The second wall segment 33 of the basin 16 also includes at least one connecting aperture 36 for engaging a corresponding connecting member 21d, 22d on a side surface 21, 22 of the support body 12. The connecting aperture 36 preferably comprises a rounded first portion and a slotted second portion to lock the connecting members in place. Accordingly, the rounded first portion should have a diameter greater than the diameter of the enlarged end of the connecting member 21d, 22d and the slotted second portion should have a maximum diameter less than the diameter of the enlarged end of the connecting member 21d, 22d.

Locking tabs 37 complete the connection of the detachable basin 16 by positioning one tab on each side of an edge of the bottom surface 23. The locking tabs 37 provide vertical stability to the basin 16, helping to keep it from being accidentally knocked off the rack 10. Alternatively, positive engaging mechanisms, such as c-clips (not shown) or the like may be used to connect the basin 16 to the edge of bottom surface 23.

The floor of the basin compartment is preferably pitched toward the second wall segment 33 where a drain hole 38 is provided, as best shown in FIG. 10. The drain hole 38 allows water that is funneled by the sloped floor to be drained from the compartment and onto the first detachable basin 14. Accordingly, the drain hole 38 should be positioned above the first detachable basin 14, as shown in FIG. 4. The second basin 16 is supported on an upper portion of the foot members 25 of the support body 12, as also shown in FIG. 4.

Returning to FIG. 1, the third detachable basin 18 can be seen. The third basin 18 is similar in construction to the second basin 16 as far as how it is connected to the support body 12. The third basin 18, however, has a different compartment configuration. Many different compartment variations are considered possible and fall within the intended scope of the present application.

Preferably, basin 18 comprises a shallow compartment with a plurality of finger-like projections 40 along a top span of an inner-wall. As shown in FIG. 1A, the shallow compartment can be used for the drying storage of irregular-shaped objects, while the finger-like projections 40 may be used to support cups, bottles, and the like.

The third detachable basin 18 also comprises a pitched floor which directs water out a drain hole 38 on the inner-wall. The third basin 18 is also supported on the support body 12 by upper portions of the foot members 25 much like the second basin 16.

In use, with reference to FIGS. 1A and 2, rack 10 is first constructed by raising the side surfaces 21, 22 on the support body 12. One of either the second or third detachable basin 16 or 18, respectively, is then connected to the side surfaces 21, 22 at an open basin area 24 by inserting the enlarged ends of connecting members 21d and 22d into the round portion of the corresponding connecting apertures 36 in the second wall

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segment 33. The connecting members 21d and 22d are then slid into the slot portion of the connecting apertures 36. The locking tabs 37 then engage the edge of the bottom surface 23 for added stability of the basin 16. This procedure is then repeated with the remaining of the two detachable basin.

Thereafter, the first detachable basin 14 can then be placed beneath the support body 12, resting in an elevated position on the ends of foot members 25. The basin 14 may be positioned such that the flexible spout 27 is extending from along any of the four sides of the rack 10. If the rack is being used next to a drain basin, such as a sink, the flexible spout 27 can be placed in a downward position to empty any collecting water from the stored items. When rack 10 is used as a stand alone drying storage rack, the flexible spout 27 is preferably positioned upward to retain any draining water.

While specific embodiments have been illustrated and described, numerous modifications are possible without departing from the spirit of the invention, and the scope of protection is only limited by the scope of the accompanying claims.

What is claimed is:

1. A drying storage rack comprising:

a support body having two side surfaces, a bottom surface and a plurality of foot members extending from the body, the support body being open along at least one edge of the bottom surface to define a basin area extending between two opposing side surfaces, each of the opposing side surfaces having at least one connecting member extending toward the basin area, and wherein at least one of either a second basin and a third basin comprises at least one connecting aperture for engaging a corresponding connecting member on a side surface of the support body, wherein the at least one connecting member comprises an enlarged end having a diameter and the at least one connecting aperture comprises a rounded first position and a slotted second portion, the rounded first portion having a diameter greater than the diameter of the enlarged end and the slotted second portion having a maximum diameter less than the diameter of the enlarged end; and

a first detachable basin having a substantially planar surface defined by a peripheral raised edge, and a flexible spout extending beyond an edge, the spout being capable of movement between a downward position extending below the planar surface of the basin and an upward position extending above the planar surface of the basin, wherein the basin is maintained in an elevated position by the foot members of the support body parallel to the bottom surface.

2. The drying storage rack of claim 1, wherein the bottom surface of the support body is comprised of three distinct zones created by a plurality of curved planar members defining a first zone, a plurality of raised members defining a second zone, and a zone of straight planar members.

3. The drying storage rack of claim 1, further comprising a plurality of side surfaces attached to the bottom surface, wherein the side surfaces of the support body are hinged to an edge of the bottom surface and are capable of being folded when the detachable basins are removed.

4. The drying storage rack of claim 1, wherein: the second basin is detachable and configured to be affixed to the support body and extend between two side surfaces; and

the third basin is detachable and configured to be affixed to the support body and extend between two side surfaces; wherein the second and third detachable basins each comprises a sloped bottom surface converging at an opening

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positioned above the first detachable basin when the basins are affixed to the support body.

5. The drying storage rack of claim 1, wherein the first basin is shaped to allow the spout to be oriented below any side of the bottom surface.

6. The drying storage rack of claim 5, wherein the first basin is square.

7. The drying storage rack of claim 1, wherein the support body has two basin areas opposite each other, and both the second basin and the third basin comprise at least one connecting aperture for engaging a corresponding connecting member on a side surface of the support body.

8. The drying storage rack of claim 4, wherein the second basin comprises a compartment defined by a first wall segment being curved at each end to connect to a second wall segment having a plurality of drain openings, and wherein the compartment comprises at least one slidably removable panel which connect to each of the first and second wall segments to divide the compartment into at least two sub-compartments.

9. The drying storage rack of claim 4, wherein the second basin further comprises at least one sub-compartment panel configured to cover an upper opening of a sub-compartment and having a plurality of slotted openings therein to accommodate articles to be held in a vertical position for drying.

10. A drying storage rack comprising;

a support body comprising:

a bottom surface including three distinct zones created by a plurality of curved planar members defining a first zone, a plurality of raised members defining a second zone, and a zone of straight planar members, two side surfaces attached substantially perpendicular to and along an edge of the bottom surface, the support body being open along at least one edge of the bottom surface to define a basin area extending between two opposing side surfaces, each of the opposing side surfaces having at least one connecting member extending toward the basin area, and a plurality of foot members extending from the body in a direction opposite the side surfaces;

a first detachable basin having a substantially planar surface, defined by a peripheral raised edge, and having a flexible spout extending beyond an edge, the spout being capable of movement between a downward position extending below the planar surface of the basin and an upward position extending above the planar surface of the basin, the first basin being maintained in an elevated position by the foot members of the support body parallel to the bottom surface with the spout oriented below a side surface;

a second detachable basin having a sloped bottom surface converging at an opening positioned above the first detachable basin and configured to be affixed to the support body and extend between two side surfaces; and

a third detachable basin having a sloped bottom surface converging at an opening positioned above the first detachable basin and configured to be affixed to the support body and extend between two side surfaces, wherein at least one of either the second basin and the third basin comprises at least one connecting aperture for engaging a corresponding connecting member on a side surface of the support body.

11. The drying storage rack of claim 10, wherein the first basin is square.

12. The drying storage rack of claim 10, wherein the at least one connecting member comprises an enlarged end having a diameter and the at least one connecting aperture comprises a rounded first portion and a slotted second portion, the

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rounded first portion having a diameter greater than the diameter of the enlarged end and the slotted second portion having a maximum diameter less than the diameter of the enlarged end.

13. The drying storage rack of claim 10, wherein the support body has two basin areas opposite each other, and both the second basin and the third basin comprise at least one connecting aperture for engaging a corresponding connecting member on a side surface of the support body.

14. The drying storage rack of claim 10, wherein the second basin comprises a compartment defined by a first wall segment being curved at each end to connect to a second wall

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segment having a plurality of drain openings, and wherein the compartment comprises at least one slidably removable panel which connect to each of the first and second wall segments to divide the compartment into at least two sub-compartments.

15. The drying storage rack of claim 10, wherein the second basin further comprises at least one sub-compartment panel configured to cover an upper opening of a sub-compartment and having a plurality of slotted openings therein to accommodate articles to be held in a vertical position for drying.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,407,059 B2
APPLICATION NO. : 11/302301
DATED : August 5, 2008
INVENTOR(S) : Ann Sullivan et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 6

Claim 10; line 39 “adirection” should be --**a direction**--.

Column 6

Claim 10; line 46 “man” should be --**in an**--.

Column 6

Claim 12; line 67 “arounded” should be --**a rounded**--.

Signed and Sealed this

Thirtieth Day of September, 2008

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looping initial "J" and a distinct "D".

JON W. DUDAS
Director of the United States Patent and Trademark Office